EXHIBIT LOG
"Home Subdivision; Division "B"
Preliminary Major Subdivision Application No. SUB 19-001

1 Preliminary Major Subdivision Application received September 23, 2019.

2. Preliminary subdivision plans received June 2, 2021.

3. Notice of complete application issued September 25, 2019.

4. Notice of Incomplete Application issued November 14, 2019.

5. Notice of Complete Application issued September 22, 2021

6 SEPA Threshold Determination & SEPA Environmental Checklist.

7 Agency Comments:

   a. Jamestown S'Klallam Tribe comments dated 10-18-19.

   b. Department of Ecology comments dated 10-25-19.

   c. Department of Archaeology and Historic Preservation comments. Public Works Preliminary review comments dated 11-20-19.

   d. City of Sequim Public Works and Engineering comments dated December 30, 2021.

   e. City of Sequim Public Works and Engineering revised comments dated January 13 2022.

8 Public comments:

   a. Cherry Blossom Estates comments 10-11-19, received 10-18-19.

   b. Kristina Hinkle comments received dated 10-22-19, received 10-25-19.

   c. Kathy and Dan Wagner comments received 10-28-19.

   d. Fred Sharpe comments received 10-29-19.

   e. William & Susan Schneider comments received 1-13-22.

   f. Brian Pickering comments w-attachment received 1-13-22.

   g. Judy Gauderman comments received 1-13-22.

   h. Clifford Ayres comments received 1-13-22.

   i. Mary Flagg comments received 1-10-22.

   j. Ben Fisher comments received 1-3-22.

   k. Ben Fisher comments (cover email) and attachment received 1-5-22.

   l. David Meissner comments received 1-5-22.

   m. Patrick and Mary Helen Benapfl comments received 1-18-22.

   n. John Akridge comments received 1-16-22.

   o. Rick and Sue Harrison comments received 1-17-22.

   p. Steve Graham attachment received 1-18-22.

   q. Steve Graham comments w/ attachment received 1-18-22.

   r. Ben Fisher comments received 1-18-22.

   s. David Kittle comments received 2-6-22.

9 Neighborhood Meeting notes and sign in sheet.

10 Legal Notices/Affidavits; Notice of Application, SEPA Threshold Determination, Public Meeting and Public Hearing (affidavit of mailing and publication confirmation).

11. Applicant's Engineer Response to Pre-Plat Comments dated

12 Geotechnical Report for Home Subdivision Phase B prepared by Zenovic and Associates.

13. Preliminary Stormwater Control Plans for Home Subdivision - Phase B dated June 1, 2021.

14. Home Subdivision Phase B Traffic Impact Analysis dated October 18, 2018.

15. Traffic Impact Analysis Comment Response and TSI [3rd Party] review comments dated December 23, 2019.

16. Northpointe Construction response dated 01-11-22.

17. Excerpt from SEPA Checklist provided by applicant on 01-14-22.

Exhibit 1

City of Sequim Planning Dept.
615 N. 5th Ave.
Sequim, WA 98382
Phone: (360) 683-4908
Fax: (360) 681-0552
www.ci.sequim.wa.us

APPLICATION FOR A MAJOR SUBDIVISION (5-LOTS OR MORE)

For Department Use Only:

Application Fee of $1,250.00 plus consultant fee, if any; non-refundable

Receipt Number:

Date:

Clerk:

Application Number: _____

Associated Applications: _____

_____

_____

Latecomer/DRCA:

APPLICANT INFORMATION

Owner's Name: Green Crow Investments Co., LLC

Owner's E-mail Address: bruce@greencrow.com

Owner's Mailing Address: P.O. Box 2439, Port Angeles, WA 98362

Owner's Telephone: 360-417-3669 Business Telephone: 360-477-8306

Representative's Name: Bruce Emery

Representative's E-mail Address: (same)

Representative's Mailing Address: (same)

Representative's Telephone: (same)

Are there any critical areas; such as wetlands, critical wildlife habitat, steep slopes (greater than 15%), frequently flooded areas, irrigation ditches, streams and stream corridors? ☐ No X Yes

If yes, attach the appropriate environmental analysis. (see attached)

This Major Subdivision is for? X Residential Development ☐ Commercial Development ☐ Mixed-Use Development

Are there any latecomers/Developer Reimbursement Collection Agreements? If yes, attach the appropriate information.
No.

Please provide the existing Address, Legal Description and/or Parcel Number(s)? 033030-590000
Use and attach additional pages if necessary. (See Cover letter for legal description)

Revised: 10-04-11

Major Subdivision Application
Submittal Requirements Checklist

******It is the responsibility of the applicant to ensure that all submittal requirements listed below are turned in as part of this application. Incomplete applications will not be accepted by the City of Sequim Planning Department.******

- ☒ A Pre-Application meeting shall take place prior to formal submittal of the Major Subdivision application ($350.00-fee). Projects involving construction of pubic infrastructure (streets, utilities, etc.) require a Developer Extension Agreement.
- ☒ A complete Major Subdivision application with all required studies and submittal materials ($1,250.00-fee).
- ☒ State Environmental Policy Act (SEPA) Checklist ($500.00-fee).
- ☒ Title Report or other proof of ownership. – Deed
- ☒ Critical Areas special studies where required by the Critical Areas Ordinance (SMC 18.70 &18.80).
- ☒ Preliminary Stormwater Drainage Plans, prepared consistent with the requirements of SMC Title 13.
- ☒ Estimated quantities of fill exported and imported to the site. – see CoverLetter, SEPAChecklist
- ☒ Location of streams, irrigation ditches, drainage ditches, wetlands, ponds, floodways or other water courses on or within 200'□of the proposed project.
- ☒ Location, extent and type of wooded areas and all trees greater than eight inches in diameter, or identified as species of local significance.
- ☒ Adjacent property owners' list for all properties located within a 300'□radius obtained for Clallam County assessor's office.
- ☒ A scaled vicinity map showing the subject property in reference to surrounding properties, streets, subdivisions, municipal boundaries, identified critical areas within 500'□of the subject property, and including a north arrow.
- ☒ Copies of any existing and/or proposed deed restrictions or covenants.
- ☒ Draft maintenance agreements and proposed management entities responsible for tax payments and maintenance of common facilities (such as roads, stormwater facilities, open spaces, trails, parks, etc.)
- ☒ Preliminary utility plans, including provisions for water, sewer, underground power where appropriate, telecommunications, and solid waste disposal.

☒ Preliminary landscaping plans.

☒ For proposed replatting of existing subdivisions: the lots, blocks, streets, etc. of the original plat shown with dotted lines in the proper positions in relation to the new arrangement of the plat, the new plat being clearly shown in solid lines to avoid ambiguity.

☒ Any additional materials, as determined by the department during the required pre-application meeting, to be necessary to fully evaluate the application.

☒ A description of how parking requirements will be met.

☒ Preliminary road plans including plan, sections, and profiles.

☒ Preliminary phasing plan, if proposed.

☒ **Five Copies of an 18" x 24" or larger Major Subdivision map prepared by a Washington State licensed and registered land surveyor, drawn at a horizontal scale of 50-feet or fewer to the inch depicting the following items:**

☒ The name of the project.

☒ Legal Description of the entire parcel.

☒ Date, scale and north arrow.

☒ Boundary lines, right-of-way for streets, private or public easements (their purpose) and property lines of lots.

☒ Location of all open spaces.

☒ Location of all utilities and other improvements, with accurate bearings, dimensions of angles and arcs, and all curve data describing the location of improvements.

☒ Street (right-of-way) widths and names.

☒ Lot acreage, dimensions and lot numbers.

☐ After all site construction work is complete, signed off and inspected by the City of Sequim, the applicant shall submit a Final Major Subdivision map ($600.00).

******The City of Sequim Planning Department may require additional information necessary for decision making purposes.******

I certify that the above information is true and correct to the best of my knowledge and accept responsibility for all claims and damages which may be occasioned to any other land or persons by actions authorized by the City of Sequim in relation to this Major Subdivision.

Bruce W. Emery, Agent — August 13, 2019

Revised: 10-04-11

Owner(s) _____ Date _____

Representative(s) Date

Revised: 10-04-11

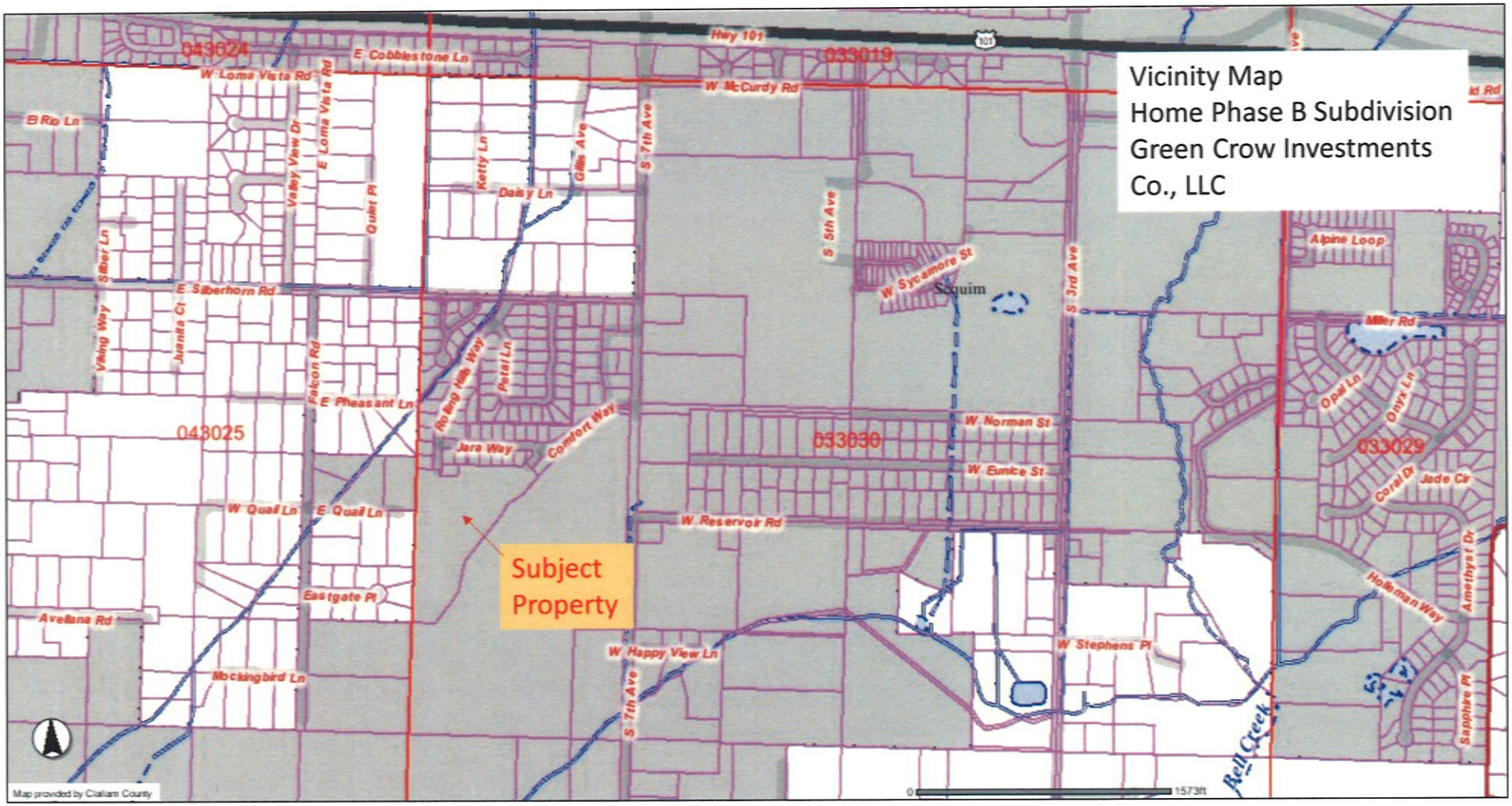

Vicinity Map
Home Phase B Subdivision
Green Crow Investments
Co., LLC
Subject Property
Hwy 101
W McCurdy Rd
E Cobblestone Ln
W Loma Vista Rd
E Loma Vista Rd
El Rio Ln
Valley View Dr
Quiet Pl
Ketty Ln
Daisy Ln
Gills Ave
S 7th Ave
S 5th Ave
S 3rd Ave
W Sycamore St
Sequim
Alpine Loop
Miller Rd
Silber Ln
Viking Way
Juanita Ct
E Silberhorn Rd
Falcon Rd
E Pheasant Ln
Rolling Hills Way
Petal Ln
Jara Way
Comfort Way
W Norman St
W Eunice St
Opal Ln
Onyx Ln
Coral Dr
Jade Cir
W Quail Ln
E Quail Ln
W Reservoir Rd
Eastgate Pl
Avellana Rd
Mockingbird Ln
W Happy View Ln
W Stephens Pl
Hoffman Way
Amethyst Dr
Sapphire Pl
Bell Creek
043024
033019
043025
033030
033029
Map provided by Clallam County
0
1573ft

Exhibit 2.



SITE PLAN

Scale: 1" = 100'

0 100' 200' 300'

CITY OF SEQUIM, MAJOR SUBDIVISION FOR:
HOME – PHASE B (PRE18–003)
IN SECTION 30, TOWNSHIP 30 NORTH,
RANGE 03 WEST, W.M.
CITY OF SEQUIM, CLALLAM COUNTY

PROJECT INFORMATION

APPLICANT/OWNER:	GREEN CROW INVESTMENTS, LLC P.O. BOX 2439 PORT ANGELES, WA. 98362
PROPOSED PROJECT:	PHASE-2: A 38 LOT SUBDIVISION -OFF COMFORT WAY AND ROLLING HILLS WAY
ZONING:	S_R4-8
UTILITIES:	SANITARY SEWER, WATER - CITY OF SEQUIM POWER - CLALLAM COUNTY PUD #1 COMMUNICATIONS - CENTURY LINK, WAVE BROADBAND
PARCEL NO.:	03-30-30-59-0000
DATE OF PREPARATION:	JULY 2019

HORIZONTAL AND VERTICAL DATUM:
TBD

MAP LEGEND

- SEISMIC SOIL AREA
- LANDSLIDE HAZARD AREA (NOT INCLUDED IN COUNTY CRITICAL AREAS MAPPING)
- 500' OFFSET FROM PROJECT BOUNDARIES
- STREAM/DITCH/IRRIGATION CHANNELS
- PROJECT PROPERTY BOUNDARIES

MAPPING NOTES

PARCEL, STREAM AND SEISMIC SOIL MAPPING OBTAINED FROM CLALLAM COUNTY GIS MAPPING DATA.
WETLAND MAPPING OBTAINED FROM THE NATIONAL WETLAND INVENTORY COMPILED BY THE U.S. FISH AND WILDLIFE SERVICE.

THE CRITICAL AREAS SHOWN IN THIS PLAN ARE BASED ON GENERALIZED SOURCES ABOVE AND MAY NOT ACCURATELY REPRESENT THE ACTUAL TYPES AND EXTENTS OF THE CRITICAL AREAS IN THE SITE VICINITY. THIS MAP IS NOT INTENDED TO SUPERSEDE PRIOR OR SUBSEQUENT PROFESSIONAL STUDIES/SURVEYS OF THE ACTUAL CRITICAL AREAS LOCATED NEAR OR WITHIN THE PROJECT SITE.

VICINITY NOTES

THE TOPOGRAPHY TO THE NORTH, AND WEST OF THE SITE SLOPE DOWN TO THE NORTH AT SIMILAR GRADES TO THOSE ONSITE. A STEEP SLOPE IS LOCATED ON THE ADJACENT PROPERTY TO THE SOUTHEAST AND PARALLELS THE SOUTHEAST PROPERTY LINE. THIS SLOPE VARIES IN HEIGHT FROM APPROXIMATELY 30 TO 50 FEET AND SLOPES AT APPROXIMATE GRADES OF 50%. THE AREA LOCATED ABOVE THE STEEP SLOPE IS PRIMARILY LEVEL WITH A SLIGHT SLOPE TO THE NORTH.

THE ZONING OF THE ALL PARCELS WITHIN 500 FEET OF THE SUBJECT PARCEL ARE ZONED RESIDENTIAL (EITHER R4-8 IN THE CITY OF SEQUIM AND S(R-II) CLALLAM COUNTY).

Exhibit 2

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:	MARK	NOTE
DATE		

TITLE: *PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY SEQUIM, WA*

VICINITY MAP

CLIENT: *GREEN CROW INVESTMENTS CO. LLC*
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 100'

FILE: *18252-VM*

JOB NO: 18252

DATE: *June 1, 2021*

SET: PRE-PLAT

SETH J. RODMAN
STATE OF WASHINGTON
53777
REGISTERED
PROFESSIONAL ENGINEER

SHEET

C000

HIGHLAND IRRIGATION DITCH (ABANDONED)

APPROXIMATE EDGE OF SLIGHT LANDSLIDE HAZARD AREA (SLOPE EXCEEDS 40%)

PROJECT SITE

PHASE B-1
PHASE B-2
PHASE B-3
PHASE B-4
PHASE A (COMPLETED)

COMFORT WAY

ROLLING HILLS WAY

STREAM MAPPING FROM COUNTY DATA, ALSO APPEARS ON NATIONAL WETLAND INVENTORY MAPS, CHANNEL OR ORTHER WET FEATURES NOT OBSERVED ONSITE

EXISTING OAK TREES TO BE PROTECTED

APPROXIMATE EDGE OF DRIPLINE

OPEN SPACE Area : 17131

OPEN SPACE Area : 4089

OPEN SPACE Area : 3787

LOT 51 7048 SF

WATER TRANSMISSION MAIN EASEMENT FROM INFILTRATION GALLERY AT DUNGENESS RIVER

LOCATION MAP

KENNETH & ANGELA FREEMAN PN:59-0360

EDWARD & EDITH ANDERS PN:59-0350

PATRICK & MARY HELEN BENAPFL PN:59-0340

DAVID & LORRA MEISSNER & CORNETET PN:59-0330

SUSY & BRIAN SO PICKERING PN:59-0320

RICHARD & POON DEGROAT PN:59-0310

JUDITH GAUDERMAN PN:59-0290

UDITH GAUDERMAN PN:59-0300

SUSAN & RICHARD HARRISON PN:59-0220

GREEN CROW INVESTMENTS CO LLC PN:03-30-30-59-0000

BOYD FAMILY LTD PTNSHP PN:03-30-30-32-0010

PHILIP & JOANN MORTENSON

DIAN WOODLE PN:04-30-25-56-0050

LEX & KARLA MORGAN TTEES PN:04-30-25-14-9320

LEGEND:

..... PROPERTY BOUNDARY
..... BUILDING SETBACK
..... EASEMENT BOUNDARY
..... R.O.W. CENTERLINE

SITE LAND USAGE DATA

OVERALL	NUMBER OF RESIDENTIAL LOTS	33 LOTS
	GROSS ACREAGE	9.14 AC±
	RESIDENTIAL LOT AREA	6.45 AC±
	COMMON OPEN SPACE AREA	0.57 AC±
	RIGHTS-OF-WAY AREA	2.12 AC±
	GROSS DENSITY	3.61 UNITS/AC
	NET DENSITY	5.12 UNITS/AC
PHASE B-1	NUMBER OF RESIDENTIAL LOTS	10 LOTS
	GROSS ACREAGE	2.42 AC±
	RESIDENTIAL LOT ACREAGE	1.80 AC±
	GROSS DENSITY	4.13 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.56 UNITS/ACRE
PHASE B-2	NUMBER OF RESIDENTIAL LOTS	4 LOTS
	GROSS ACREAGE	1.68 AC±
	RESIDENTIAL LOT ACREAGE	0.75 AC±
	GROSS DENSITY	2.38 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.33 UNITS/ACRE
PHASE B-3	NUMBER OF RESIDENTIAL LOTS	11 LOTS
	GROSS ACREAGE	2.73 AC±
	RESIDENTIAL LOT ACREAGE	2.19 AC±
	GROSS DENSITY	4.03 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.02 UNITS/ACRE
PHASE B-4	NUMBER OF RESIDENTIAL LOTS	8 LOTS
	GROSS ACREAGE	2.30 AC±
	RESIDENTIAL LOT ACREAGE	1.72 AC±
	GROSS DENSITY	3.47 UNITS/ACRE
	NET RESIDENTIAL DENSITY	4.65 UNITS/ACRE
SETBACKS	FRONT YARD	15'
	REAR YARD	15'
	SIDE YARD	5'

SITE PLAN

Scale: 1" = 40'

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY SEQUIM, WA

PRELIMINARY LOT LAYOUT

CLIENT: GREEN CROW INVESTMENTS CO. LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 40'

FILE: 18252-P3

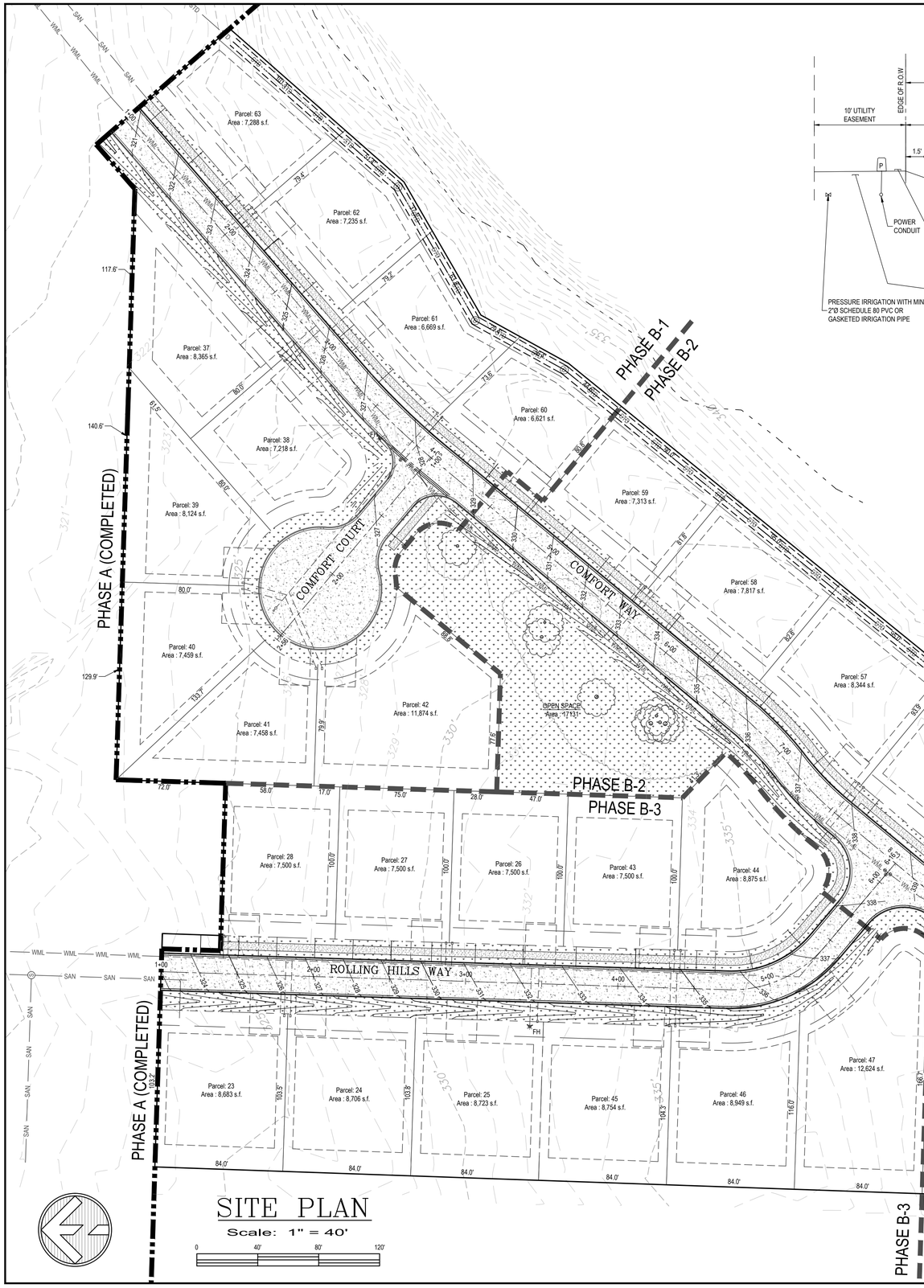
JOB NO: 18252

DATE: June 1, 2021

SET: PRE-PLAT

SETH J. RODMAN
STATE OF WASHINGTON
53777
REGISTERED
PROFESSIONAL ENGINEER

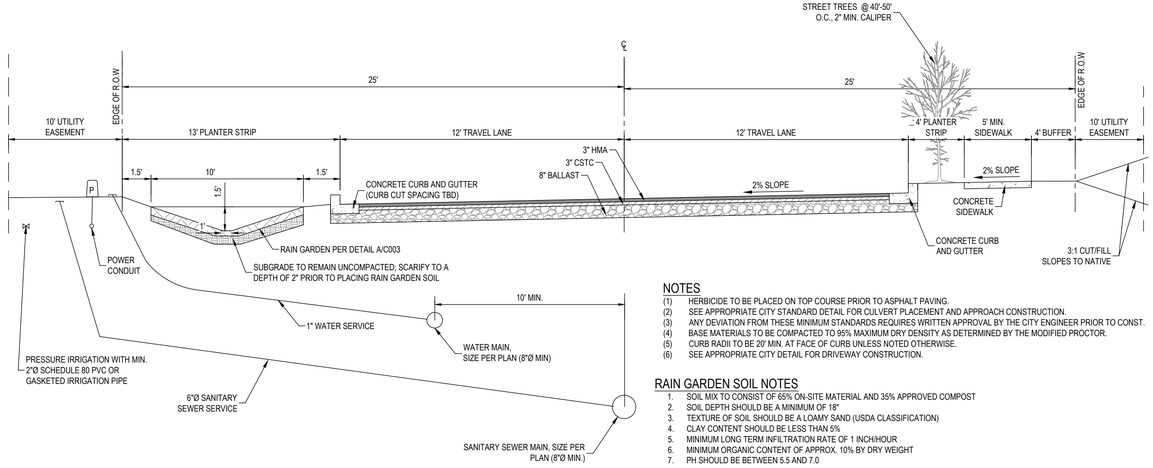
SHEET
C001



SITE PLAN

Scale: 1" = 40'

0 40' 80' 120'



A STANDARD ROADWAY SECTION

C002 Scale: NTS

NOTES

(1) HERBICIDE TO BE PLACED ON TOP COURSE PRIOR TO ASPHALT PAVING.
(2) SEE APPROPRIATE CITY STANDARD DETAIL FOR CULVERT PLACEMENT AND APPROACH CONSTRUCTION.
(3) ANY DEVIATION FROM THESE MINIMUM STANDARDS REQUIRES WRITTEN APPROVAL BY THE CITY ENGINEER PRIOR TO CONST.
(4) BASE MATERIALS TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR.
(5) CURB RADII TO BE 20' MIN. AT FACE OF CURB UNLESS NOTED OTHERWISE.
(6) SEE APPROPRIATE CITY DETAIL FOR DRIVEWAY CONSTRUCTION.

RAIN GARDEN SOIL NOTES

1. SOIL MIX TO CONSIST OF 65% ON-SITE MATERIAL AND 35% APPROVED COMPOST
2. SOIL DEPTH SHOULD BE A MINIMUM OF 18"
3. TEXTURE OF SOIL SHOULD BE A LOAMY SAND (USDA CLASSIFICATION)
4. CLAY CONTENT SHOULD BE LESS THAN 5%
5. MINIMUM LONG TERM INFILTRATION RATE OF 1 INCH/HOUR
6. MINIMUM ORGANIC CONTENT OF APPROX. 10% BY DRY WEIGHT
7. PH SHOULD BE BETWEEN 5.5 AND 7.0

LEGEND:

..... PROPERTY BOUNDARY
..... BUILDING SETBACK
..... EASEMENT BOUNDARY
..... TRAVELLED WAY CENTERLINE
..... EDGE OF DRIVEWAY
..... CONCRETE SIDEWALK
..... ASPHALT PAVING
..... OPEN SPACE/GREENBELT

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY I SEQUIM, WA

PRELIMINARY CIRCULATION LAYOUT

CLIENT: GREEN CROW INVESTMENTS CO. LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 40'
FILE: 18252-P3
JOB NO: 18252
DATE: June 1, 2021
SET: PRE-PLAT

SETH J. ROBMAN STATE OF WASHINGTON 53777 REGISTERED PROFESSIONAL ENGINEER

SHEET C002

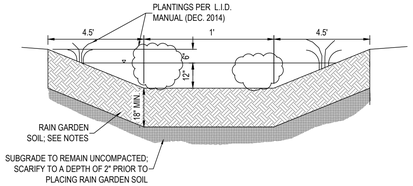
SITE PLAN

Scale: 1" = 40'

0 40' 80' 120'

LEGEND:

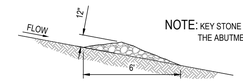
- ..... PROPERTY BOUNDARY
- ..... BUILDING SETBACK
- ..... EASEMENT BOUNDARY
- ..... PROPOSED STORM LINE
- ..... PROPOSED WATER LINE
- ..... PROPOSED SEWER LINE
- ..... PROPOSED UTILITY/COMMUNICATION LINES
- ..... PROPOSED IRRIGATION LINES
- ..... PROPOSED SANITARY SEWER SERVICE
- ..... PROPOSED SANITARY SEWER MANHOLE
- ..... PROPOSED SANITARY SEWER CLEANOUT
- CB ..... PROPOSED STORM DRAIN CATCH BASIN
- ..... PROPOSED RAIN GARDEN
- ..... PROPOSED WATER SERVICE CONNECTION
- ..... PROPOSED POWER/COMMUNICATION SERVICE
- FH ..... PROPOSED FIRE HYDRANT
- ..... PROPOSED PEDESTRIAN LUMINARIES (200' O.C. TYP.)



RAIN GARDEN SOIL NOTES

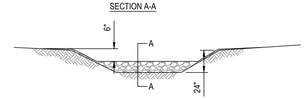
1. SOIL MIX TO CONSIST OF 65% ON-SITE MATERIAL AND 35% APPROVED COMPOST
2. SOIL DEPTH SHOULD BE A MINIMUM OF 18"
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4. CLAY CONTENT SHOULD BE LESS THAN 5%
5. MINIMUM LONG TERM INFILTRATION RATE OF 1 INCH/HOUR
6. MINIMUM ORGANIC CONTENT OF APPROX. 10% BY DRY WEIGHT
7. PH SHOULD BE BETWEEN 5.5 AND 7.0

A C003 RAIN GARDEN SECTION
Scale: NTS

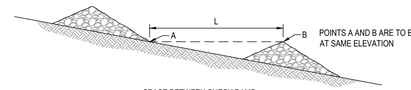


NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MIN. OF 18" TO PREVENT FLOW AROUND DAM

SECTION A-A



VIEW LOOKING UPSTREAM



POINTS A AND B ARE TO BE AT SAME ELEVATION

SPACE BETWEEN CHECK DAMS

B C003 CHECK DAM DETAIL
Scale: NTS

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY SEQUIM, WA

PRELIMINARY UTILITY PLAN

CLIENT:
GREEN CROW INVESTMENTS CO, LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 40'

FILE: 18252-P3

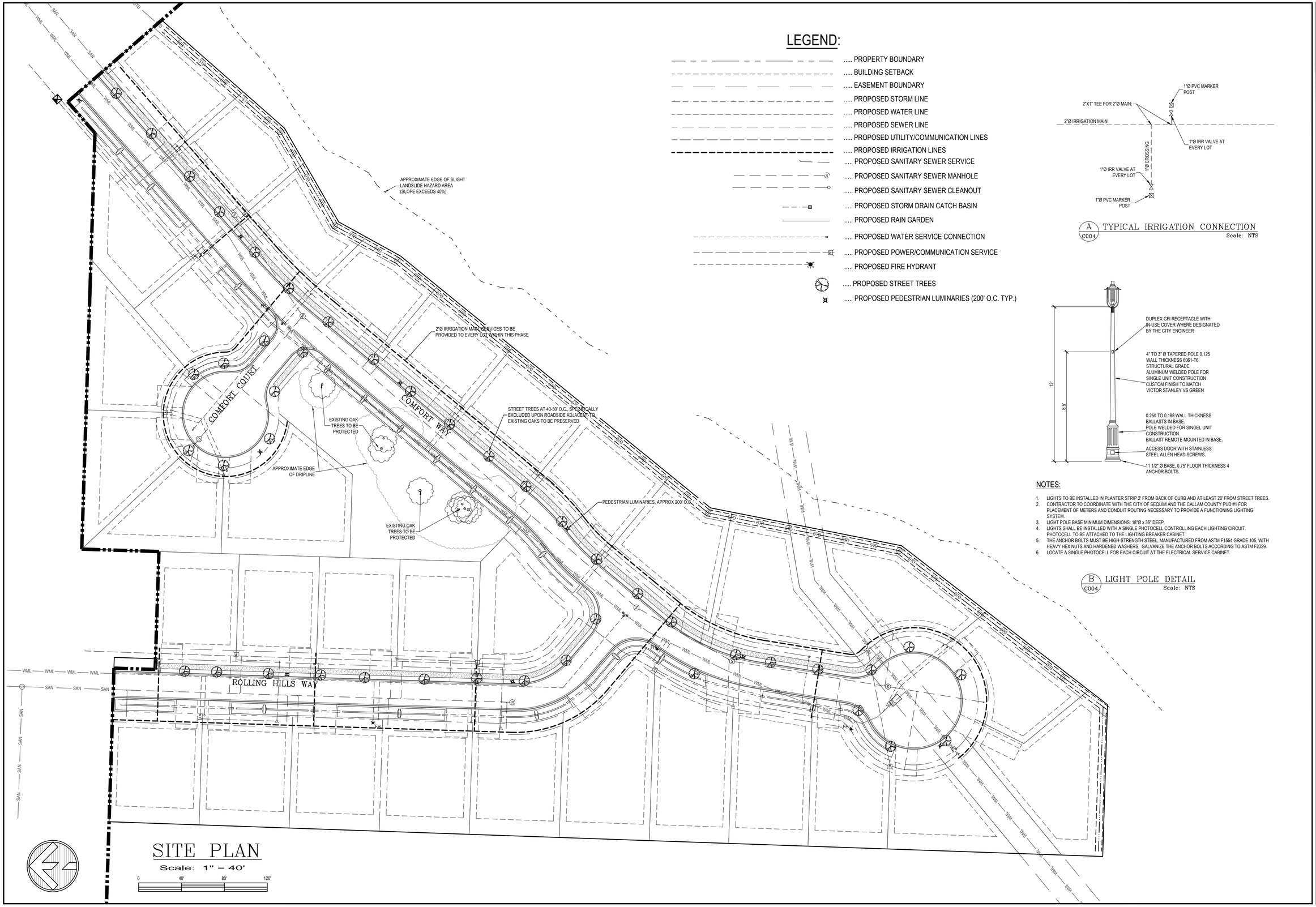
JOB NO: 18252

DATE: June 1, 2021

SET: PRE-PLAT



SHEET
C003



SITE PLAN

Scale: 1" = 40'

0 40' 80' 120'

LEGEND:

- ..... PROPERTY BOUNDARY
- ..... BUILDING SETBACK
- ..... EASEMENT BOUNDARY
- ..... PROPOSED STORM LINE
- ..... PROPOSED WATER LINE
- ..... PROPOSED SEWER LINE
- ..... PROPOSED UTILITY/COMMUNICATION LINES
- ..... PROPOSED IRRIGATION LINES
- ..... PROPOSED SANITARY SEWER SERVICE
- ..... PROPOSED SANITARY SEWER MANHOLE
- ..... PROPOSED SANITARY SEWER CLEANOUT
- ..... PROPOSED STORM DRAIN CATCH BASIN
- ..... PROPOSED RAIN GARDEN
- ..... PROPOSED WATER SERVICE CONNECTION
- ..... PROPOSED POWER/COMMUNICATION SERVICE
- ..... PROPOSED FIRE HYDRANT
- ..... PROPOSED STREET TREES
- ..... PROPOSED PEDESTRIAN LUMINARIES (200' O.C. TYP.)

A C004 TYPICAL IRRIGATION CONNECTION

Scale: NTS

NOTES:

1. LIGHTS TO BE INSTALLED IN PLANTER STRIP 2' FROM BACK OF CURB AND AT LEAST 20' FROM STREET TREES.
2. CONTRACTOR TO COORDINATE WITH THE CITY OF SEQUIM AND THE CALLAM COUNTY PUD #1 FOR PLACEMENT OF METERS AND CONDUIT ROUTING NECESSARY TO PROVIDE A FUNCTIONING LIGHTING SYSTEM.
3. LIGHT POLE BASE MINIMUM DIMENSIONS: 18"Ø x 36" DEEP.
4. LIGHTS SHALL BE INSTALLED WITH A SINGLE PHOTOCELL CONTROLLING EACH LIGHTING CIRCUIT. PHOTOCELL TO BE ATTACHED TO THE LIGHTING BREAKER CABINET.
5. THE ANCHOR BOLTS MUST BE HIGH-STRENGTH STEEL, MANUFACTURED FROM ASTM F1554 GRADE 105, WITH HEAVY HEX NUTS AND HARDENED WASHERS. GALVANIZE THE ANCHOR BOLTS ACCORDING TO ASTM F2329.
6. LOCATE A SINGLE PHOTOCELL FOR EACH CIRCUIT AT THE ELECTRICAL SERVICE CABINET.

B C004 LIGHT POLE DETAIL

Scale: NTS

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY - SEQUIM, WA

IRRIGATION AND LANDSCAPING PLAN

CLIENT:
GREEN CROW INVESTMENTS CO. LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 40'

FILE: 18252-P3

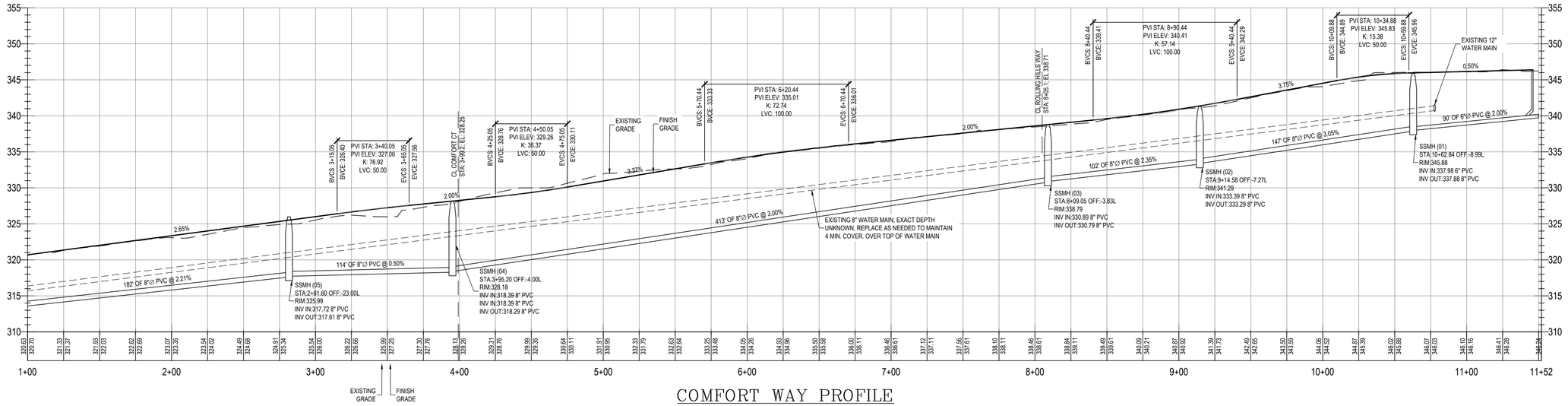
JOB NO: 18252

DATE: June 1, 2021

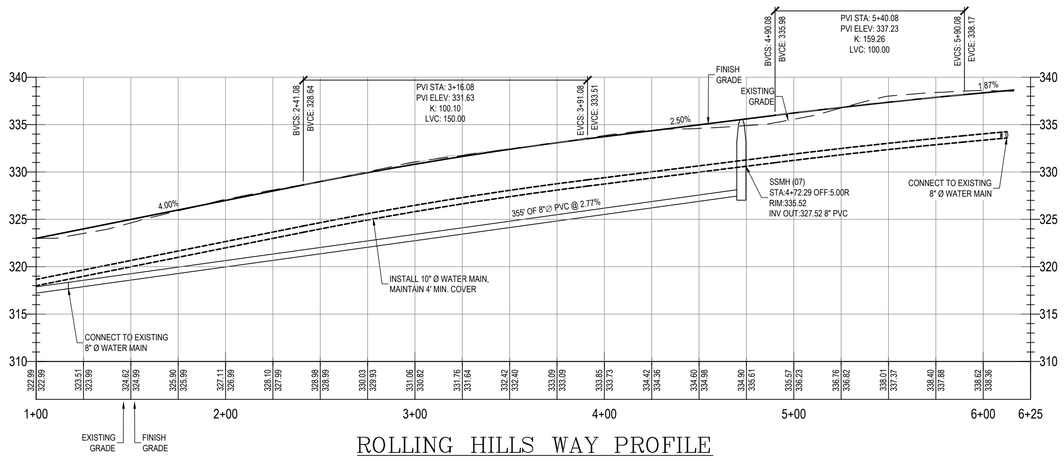
SET: PRE-PLAT

KEITH J. RODMAN
STATE OF WASHINGTON
23177
REGISTERED
PROFESSIONAL ENGINEER

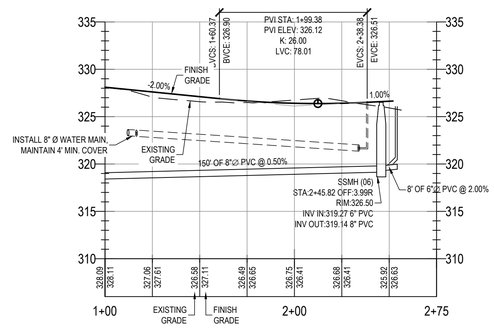
SHEET
C004



COMFORT WAY PROFILE
SCALE: 40
VERT. EXAGERATION: 5.0



ROLLING HILLS WAY PROFILE
SCALE: 40
VERT. EXAGERATION: 5.0



COMFORT COURT PROFILE
SCALE: 40
VERT. EXAGERATION: 5.0

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE II - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY - SEQUIM, WA

ROADWAY PROFILES

CLIENT:
GREEN CROW INVESTMENTS CO. LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: NTS

FILE: 18252-P3

JOB NO: 18252

DATE: June 1, 2021

SET: PRE-PLAT

SETH J. RODMAN
STATE OF WASHINGTON
53777
REGISTERED
PROFESSIONAL ENGINEER

SHEET
C005

Exhibit 3

CITY OF SEQUIM

152 West Cedar Street Sequim, WA 98382
City Hall (360) 683-4139 FAX (360) 681-3448
Public Works (360) 683-4908 FAX (360) 681-0552

September 25, 2019

Bruce Emery
Green Crow Investments Company, LLC
P.O. Box 2439
Port Angeles, WA 98362

Subject: Notice of Complete Application – Preliminary Major Subdivision Application No. SUB-19-001

Dear Bruce,

This letter is your official notice that your application for preliminary major subdivision, which we received on September 23, 2019, has been determined complete in accordance with SMC 20.01.130 as of September 25, 2019. This Determination of Completeness does not preclude the City requiring additional information for purposes of completing adequate review or requiring new information relative to corrected plans or studies performed at any time.

Pursuant to SMC 20.01.230, a final decision on a development proposal subject to a Type C-2 action shall be made within 120 days of this determination of completeness notwithstanding any exclusions to this timeframe provided in SMC 20.01.230 1-7. Therefore, a decision on your application is due no later than January 23, 2020 which is 120 days from the September 25th date of completeness.

The next step in the process will include agency review, public notice, public review and comment periods as required by Chapter 20.01, SMC. Please see the attached summary of public notice and neighborhood meeting procedures and note, that it is the applicant's responsibility to arrange and conduct a neighborhood and community presentation, per Chapter 20.01.100(H).

If you have any questions or concerns regarding this matter, please contact the City of Sequim Department of Community Development at (360) 582-2459 or email me at twoolett@sequimwa.gov. Our office hours are 7:30 a.m. - 4:00 p.m., Monday through Friday.

Sincerely,

Tim Woolett, Senior Planner

PUBLIC NOTICE DETAILS

Public notice for the application requires coordinated timing between the applicant and City Staff. The public notice responsibilities are summarized below:

- Sign posting
  - Staff sends applicant the sign content and design criteria
  - Applicant responsible for having the sign made with the real estate box and posting it onsite
  - Applicant shall inform Staff of the date the sign will be installed
  - Staff creates notice information sheets for the real estate boxes and emails it to the applicant.
  - Applicant responsible for keeping the real estate information box full of the notice information sheets during the public notice
- Notice to property owners within 300'
  - Staff drafts notice of application & public hearing and mails to property owners within 300 feet. Envelopes provided by the applicant will be used to send letters to neighbors
- Notice in the Peninsula Daily News (PDN)
  - Staff drafts the public notice and sends to the PDN staff
- Applicant provides location and date of the neighborhood meeting to Staff
  - Staff includes the neighborhood meeting date and time in the notice information sheets that will be sent to neighboring property owners within 300', placed in the real estate boxes on the sign posting, sent to the SEPA review team and linked on the City's website for Current Development Projects
  - If the applicant wishes to use a City facility for the neighborhood meeting, Contact Kathie Anne Sukert, Administrative Assistant, at ksukert@sequimwa.gov or at 360-683-4908.
- Staff places the public notice on the City website under Current Development Projects at http://www.sequimwa.gov/index.aspx?nid=471.
- Staff sends notice to the SEPA review team.

Exhibit 5

CITY OF SEQUIM

152 West Cedar Street Sequim, WA 98382
City Hall (360) 683-4139 FAX (360) 681-3448
Public Works (360) 683-4908 FAX (360) 681-0552

September 22, 2021

Bruce Emery
North Pointe Construction, LLC
P.O. Box 2439
Port Angeles, WA 98362

Re: Notice of Complete Application-Home-B Subdivision – SUB 19-001

Dear Bruce,

This letter is notice that your recently submitted application materials for the above referenced permit have satisfied the city's submittal requirements and the application has been determined complete in accordance with SMC 20.01.130 as of the date of this letter, September 22, 2021. This Determination of Completeness does not preclude the city requiring additional information for purposes of completing adequate review or requiring new information relative to corrected plans or studies performed at any time.

The next step in the process will include further detailed agency review, and notice of public hearing which must be no more than 30 days and no less than 10 days prior to the public hearing. We will determine a tentative public hearing date within the next five business days, after which, we will notify you so you can update the public notice sign. The public notice will also require publication in the Peninsula Daily news and mailed notice to property owners within 300 feet of the property. Please provide us with addressed stamped envelopes for all adjacent property owners located within a 300' radius of your property.

If you have any questions or concerns regarding this matter, please contact the City of Sequim Department of Community Development at (360) 582-2476 or email me at twoolett@sequimwa.gov. Our office hours are 7:30 a.m. – 4:00 p.m., Monday through Friday.

Sincerely,

Tim Woolett
Senior Planner, DCD

Cc: Barry Berezowsky
David Garlington, Public Works Director
Matt Klontz, Assistant Public Works Director / City Engineer

Exhibit 6

CITY OF SEQUIM

152 W. Cedar Street, Sequim, WA 98382
PH (360) 683-4908 FAX (360) 681-0552

MITIGATED DETERMINATIN OF NONSIGNIFICANCE (MDNS)- WAC 197-11-970
Home Subdivision, Phase B - Preliminary Major Subdivision
File N0. SUB 19-001

Description of proposal: A proposed major preliminary subdivision application to develop 33 single family residential lots on approximately 9.14 acres of property currently zoned "Single Family Residence" (R 4-8). The project would be developed in four phases. Phase B-1: 10 lots, Phase B-2: 11 lots, Phase B-3: 4 lots, and Phase B-4: 8 lots.

PROPONENT: Green Crow Investments Company, LLC, P.O. Box 2439, Port Angeles, WA 98362.

PROJECT LEAD: Bruce Emery, Green Crow Investments Company, LLC, P.O. Box 2439, Port Angeles, WA 98362.

Location of Proposal: The 9.14-acre subject property is currently configured as a single parcel situated within a portion of Section 30, Township 30 N. Range 3 W., W.M. Clallam County, Washington, located south of Comfort Way and Rolling Hills Way, and east of E. Quail Lane and Eastgate Place, Sequim, Washington; and identified as Clallam County Assessor's Parcel No. 033030-590000.

Lead Agency: City of Sequim

The lead agency for this proposal has determined that it does not pose a probable significant adverse environmental impact. Therefore, an environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information submitted by the applicant and on file with the lead agency. This information is available to the public upon request.

This MDNS is issued under WAC 197-11-355; the Optional DNS Process.

Responsible Official: Barry A. Berezowsky
Address: City of Sequim, 152 W. Cedar Street, Sequim, WA 98382
Phone: 360-681-3435

Date: November 8, 2019 Signature: _____
Barry A. Berezowsky, SEPA Responsible Official

You may appeal this determination in writing to the responsible official listed above no later than 14 calendar days from the date of this notice.

You should be prepared to make specific factual objections. Contact the responsible official to read or ask about procedures for SEPA appeals.

File SUB 19-001 – Home Subdivision, Phase B Preliminary Major Subdivision
SEPA Mitigation requirements

- WATER QUALITY

All site construction shall be conducted in compliance with the 2012 WSDOE Stormwater Manual for Western Washington, as amended in 2014.

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or storm drains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants. Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

The following construction activities require coverage under the Construction Stormwater General Permit:

1. Clearing, grading and/or excavation that results in the disturbance of one or more acres and discharges stormwater to surface waters of the State; and

2. Clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State. This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State; and

3. Any site construction activity discharging stormwater to waters of the State that Ecology:

    a) Determines to be a significant contributor of pollutants to waters of the State of Washington.

    b) Reasonably expects to cause a violation of any water quality standard.

If contamination is suspected, discovered, or occurs during the proposed SEPA action, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily apparent, or is revealed by testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator for the Southwest Regional Office (SWRO) at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact Matthew Morris with the SWRO, Toxics Cleanup Program at (360) 407-7529.

If there are known soil/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted.

You may apply online or obtain an application from Ecology's website at: http://www.ecy.wa.gov/programs/wq/stormwater/construction/ - Application. Construction site operators must apply for a permit at least 60 days prior to discharging stormwater from construction activities and must submit it on or before the date of the first public notice.

- AIR

  Potential air impacts shall be mitigated by watering the site as necessary, utilizing dust suppression options and techniques described in the WA Department of Ecology publication # 96-433, 2016.

- ENVIRIONMEANTAL HEALTH-NOISE

  To mitigate the potential for noise impacts to surrounding properties, construction activities through complete buildout of this proposed development shall be limited from 7:30 am to 7:00 pm Monday through Saturday.

- ANIMALS

  It shall be the responsibility of the applicant to take all necessary steps to prevent the incidental taking of protected species under the Endangered Species Act through habitat modification or degradation during the life of the project or development authorized by this permit or approval. The applicant shall notify the City through Its Public Works Director or designee and the Federal Agencies with responsibility for enforcement of the Endangered Species Act immediately, in the event of damage of degradation to Endangered Species habitat by or from the project or the development subject to this permit or approval. In any such case, the applicant shall, at its sole cost and expense, take all action necessary to prevent the furtherance of the damage or degradation and to restore the habitat as required by the Federal, State, and local agencies with jurisdiction.

- HISTORICAL AND CULTURAL RESOURCES

  In response to Washington Department of Archaeology & Historic Preservation (DAHP) comments, the proponent shall work with the DAHP in performing an archaeological survey. While there are currently no known archaeological resources on this site, in the event archaeological artifacts are uncovered during construction, activity shall be halted immediately, and the State Historic Preservation Office and local Tribes shall be contacted. The applicant shall follow the applicable sections of the *Inadvertent Archaeological and Historic Resources Discovery Plan for Sequim, WA* (Copy available at the City of Sequim Department of Community Development).

- TRANSPORTATION

  Prior to final subdivision approval, the applicant shall submit final construction plans for review and approval by the City of Sequim Public Works Department. In accordance with SMC 17.20.040, the plans shall demonstrate to the satisfaction of the City engineer, that curb, gutter, sidewalk, trail connections, transit stops, streets, storm drainage, sanitary sewer lines, water lines and other utilities as required, will be installed at the expense of the applicant and meet city specifications and applicable ordinances.

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals: [help]

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [help]

1. Name of proposed project, if applicable: [help]
Home Subdivision, Phase B

2. Name of applicant: [help]
Green Crew Investments Co, LLC

3. Address and phone number of applicant and contact person: [help]
P.O. Box 2439
Port Angeles, WA 98362 Bruce Emery 360-417-3669

4. Date checklist prepared: [help]
August 12, 2019

5. Agency requesting checklist: [help]
City of Sequim

6. Proposed timing or schedule (including phasing, if applicable): [help]
Phase B-1, Spring 2020; Final phase By spring 2024.
May combine phases if market conditions are favorable.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
- Traffic Impact Analysis, Jake Traffic Engineering, Inc., October 4, 2018
- Geotechnical Report, Zenovic & Associates, August 5, 2019
- Preliminary Stormwater Control Plan, Zenovic & Associates, August 7, 2019

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]
No

Concur with Checklist. - TW

10. List any government approvals or permits that will be needed for your proposal, if known. [help]
- Environmental checklist review & Determination, City of Sequim
- Subdivision approval, City of Sequim
- Stormwater Construction Permit, Washington Department of Ecology

Permits for site construction and for construction activities related to infrastructure installation.-TW

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]

Subdivision of 9.14 acres of R4-8-zoned property into 33 residential lots, ranging in size from 6,621 square feet to 12,700 square feet in area.

Concur with Checklist. - TW

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]

Located at the Southern Terminus of Rolling Hills Way and Comfort Way, in a portion of the NW ¼ of the SW ¼, and SW ¼ of the NW ¼, Section 30, Township 30 North, Range 3 West, W.M. Assessor's Tax Parcel # 033030-5[illegible].

Concur with Checklist. - TW

B. ENVIRONMENTAL ELEMENTS [help]

1. Earth [help]

a. General description of the site: [help]

The site is generally flat, with an over-all 3% slope to the North. It is vegetated with grasses and shrubs, with eight, large Garry oaks, to be retained.

Concur with Checklist. - TW

(check one): ☒ Flat, ☐ rolling, ☐ hilly, ☐ steep slopes, ☐ mountainous, ☐ other

b. What is the steepest slope on the site (approximate percent slope)? [help]

Concur with Checklist. - TW

Approximately 6%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]

Concur with Checklist. - TW

Northern 2/3rds is shown as Sequim Very Gravelly, Sandy Loam, and the southern 1/3rd is Sequim-McKenna-Mukilteo Complex, per the USDA Soil Survey for Clallam County. There are No Agricultural Lands of Long-Term significance.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]

No. A Geotechnical Report has been provided that evaluates the stability of the slope on the neighboring property to the south-east of the project site.

Concur with Checklist. - TW

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]

Total road and sidewalk area is estimated at 0.94 ac. It is expected The project will include the import of 1,600 cubic yards of road base material.

Concur with Checklist. - TW

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]

Yes, however, it is doubtful there will be any sediment transfer off-site due to pervious soils. Stormwater BMPs will also be implemented To Mitigate erosion risk.

Concur with Checklist. - TW

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]

Roads and sidewalks will cover about 17.4% of the site. Future Home construction and Drives will cover significantly more, but will be subject To City of Sequim development Standards concerning lot coverag

Concur with Checklist. - TW

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]

A Stormwater Pollution Prevention Plan (SWPPP) will be required prior to land-disturbing activities. This will include the application of BMPs To govern all future construction activities on the site.

Compliance with the Western Washington Stormwater Management Manual, 2012 Edition as amended in 2014 will be sufficient to mitigate potential impacts. - TW

2. Air [help]

a. What types of emissions to the air would result from the proposal during construc operation, and maintenance when the project is completed? If any, generally des and give approximate quantities if known. [help]

Construction equipment and vehicles during construction process. Normal residential vehicle use after Build out.

Concur with Checklist - TW

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]

No

Concur with Checklist - TW

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]

All machinery is required to meet State and Federal emissions standards. Dust may be Controlled through use of water applied To working areas as needed.

To mitigate the potential for adverse impacts to air quality due to dust emissions during construction, the proponent shall employ the use of watering all dust generating surfaces a minimum of three times daily or more as needed during construction phase of the project. Alternative non-chemical methods would be considered for approval by the City of Sequim. - TW

3. **Water** [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]

Yes. Although not shown on Clallam County Critical Area Maps, Two Type 9 Stream corridors are known to exist on portions of the slope To the South-east of the site. However, Field reconnaissance shows that no active channels exist on or within 50-feet of the subject property. Any Buffers required To protect against unstable slopes should be more than adequate to address any related concerns of this Section.

Concur with Checklist - TW

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]

No.

Concur with Checklist - TW

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]

None

Concur with Checklist - TW

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]

No

Concur with Checklist - TW

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]

No

Concur with Checklist - TW

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]

No

Concur with Checklist - TW

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]

No

Concur with Checklist - TW

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]

All Homes will have access to municipal sewer.
No waste material will be discharged To the ground.

All homes are required to hook up to municipal sewer service. - TW

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]

Runoff can be expected from roads, sidewalks, driveways and homes. Per the preliminary stormwater control plan, runoff from roads and sidewalks will be collected, treated by vegetated swales and discharged by infiltration trench. Homes will require drywell infiltration.

Stormwater collection, treatment, and infiltrationwill be in conformance with the DOE 2012 Stormwater Management Manual for Western Washington amended 2014. - TW

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]

No

Concur with Checklist - TW

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]

No. on-site treatment/infiltration will protect vicinity water courses.

Concur with Checklist - TW

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]

Compliance with future SWPPP and final stormwater control plan

A stormwater management plan and erosion and sedimentation control plan in conformance with the DOE 2012 Stormwater Management Manual for Western Washington amended 2014 will be required.-TW

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

- [x] deciduous tree: alder, maple, aspen, other
- [ ] evergreen tree: fir, cedar, pine, other
- [x] shrubs
- [x] grass
- [ ] pasture
- [ ] crop or grain
- [ ] Orchards, vineyards or other permanent crops.
- [ ] wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- [ ] water plants: water lily, eelgrass, milfoil, other
- [ ] other types of vegetation

Concur with Checklist - TW

b. What kind and amount of vegetation will be removed or altered? [help]

Shrubs and grasses will be removed for street and sidewalk installation. Garry Oaks will be protected during construction and from future development.

Concur with Checklist - TW

c. List threatened and endangered species known to be on or near the site. [help]

None known.

Concur with Checklist - TW

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]

Street trees are proposed along the street right-of-way. The existing Garry Oaks will be preserved. Native vegetation will be preserved, except for construction needs.

Concur with Checklist - TW

e. List all noxious weeds and invasive species known to be on or near the site. [help]
Poison Hemlock, Himalayan Berry and scotch broome. Poison Hemlock is being controlled through spraying.

Concur with Checklist - TW

5. **Animals** [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Concur with Checklist - TW

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site. [help]
None known

Concur with Checklist - TW

c. Is the site part of a migration route? If so, explain. [help]
Do Not Know

Concur with Checklist - TW

d. Proposed measures to preserve or enhance wildlife, if any: [help]
Preserve Existing Garry Oaks and introduce street Trees (American Hornbeam).

Concur with Checklist - TW

e. List any invasive animal species known to be on or near the site. [help]
None known

Concur with Checklist - TW

6. **Energy and Natural Resources** [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]
Electrical, propane energy will be used for lighting, home appliances and heating of future homes.

Concur with Checklist - TW

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]

Concur with Checklist - TW

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]

None proposed

Concur with Checklist - TW

7. **Environmental Health** [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [help]

No

Concur with Checklist - TW

1) Describe any known or possible contamination at the site from present or past uses. [help]

None known

Concur with Checklist - TW

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]

None present

Concur with Checklist - TW

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]

Above-ground propane storage tanks for future residential use.

City of Sequim building permit requirements will ensure that all above ground propane tanks are secured in a safe and non-hazardous manner.-TW

4) Describe special emergency services that might be required.

No special emergency services will be required.

Concur with Checklist - TW

5) Proposed measures to reduce or control environmental health hazards, if any: [help]

None needed

Concur with Checklist - TW

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]

Only neighborhood residential uses and relate Traffic

Concur with Checklist - TW

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. [help]
Short-term equipment noise for the duration of the project. Future home construction. Long-term residential use.

Concur with Checklist - TW

3) Proposed measures to reduce or control noise impacts, if any: [help]
Limit construction hours from between 7:00 Am and 7:00 PM.

Sequim codes do not regulate construction hours. To mitigate the potential for noise impacts, construction activities through complete buildout shall be limited from 7:30 am to 7:00 pm Monday through Saturday. - TW

8. **Land and Shoreline Use** [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
The site is currently vacant. Adjacent properties consist of homes and vacant lots. Some homes may experience some noise impacts during construction.

Concur with Checklist - TW

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?
Not in the recent past.

The property has been designated for residential use since being annexed into the City of Sequim. - TW

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
No

Concur with Checklist - TW

c. Describe any structures on the site. [help]
No structures present

Concur with Checklist - TW

d. Will any structures be demolished? If so, what? [help]
NO

Concur with Checklist - TW

e. What is the current zoning classification of the site? [help]
Residential (R4-8)

Concur with Checklist - TW

f. What is the current comprehensive plan designation of the site? [help]
Single Family Residential (SFR)

Concur with Checklist - TW

g. If applicable, what is the current shoreline master program designation of the site? [help]

N/A

Concur with Checklist - TW

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]

Yes. The entire property is classified by Whatcom County Critical Area Maps as Critical Aquifer Recharge Area.

There are no proposed on-site septic systems or other potential for discharge of contaminants into the ground water. All development activities are subject to the performance standards of the City's critical areas code (SMC 18.80.100.F)

i. Approximately how many people would reside or work in the

None. The project will enable 33 new residential lots for future development.

Concur with Checklist - TW

j. Approximately how many people would the completed project displace? [help]

None

Concur with Checklist - TW

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]

None needed

Concur with Checklist - TW

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]

The future lots will be subject to the existing Home Subdivision CC&Rs. Future development will be consistant with the character of current residences.

Concur with Checklist - TW

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: [help]

None needed.

Concur with Checklist - TW

9. **Housing** [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]

33 residential lots, presumably middle-income.

Concur with Checklist - TW

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]

None will be eliminated.

Concur with Checklist - TW

c. Proposed measures to reduce or control housing impacts, if any: [help]

None needed.

Concur with Checklist - TW

10. **Aesthetics** [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]

No above-ground structures are proposed at this Time. Residential structural heights are controlled by the City of Sequim Municipal Code.

Concur with Checklist - TW

b. What views in the immediate vicinity would be altered or obstructed? [help]

No views will be altered by the immediate proposal. Future residential development could have a minor impact on views to the south for some residents in Phase 4.

Concur with Checklist - TW

c. Proposed measures to reduce or control aesthetic impacts, if any: [help]

None

Concur with Checklist - TW

11. **Light and Glare** [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]

None. Glare from future development of the site will be consistent with normal residential uses.

All lighting will be subject to the requirements of the Sequim Municipal Code. - TW

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]

Concur with Checklist. - TW

No

c. What existing off-site sources of light or glare may affect your proposal? [help]

Concur with Checklist. - TW

None present.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]

None needed. Compliance with existing CC+Rs will be sufficient.

Adherence to the lighting requirements of the Sequim Municipal Code. - TW

12. **Recreation** [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]

Concur with Checklist. - TW

Walking via existing sidewalks

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]

Concur with Checklist. - TW

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]

None needed

Park impact fees will be required for each residential unit. - TW

13. **Historic and cultural preservation** [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe. [help]

Concur with Checklist. - TW

No

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]

Concur with Checklist. - TW

No

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]

The subject Phase B Lot was part of the Home Subdivision Phase A, which was evaluated under SEPA and found to contain no historic or cultural features.

Concur with Checklist. - TW

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]

Excavation activities will be stopped in the event that suspect materials or artifacts are discovered and the Nat. and local Tribes will be promptly contacted.

As mitigation, the proponent will be required to stop work and immediately notify the City of Sequim, the Jamestown S'Klallm Tribe, and the Washington State Office of Archaeology and Historic Preservation if any historical or archaeological artifacts are uncovered during development. - TW

14. **Transportation** [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]

Comfort Way and Rolling Hills Way access 7th Street and Silberhorn Road, respectively. Streets are shown on the vicinity map, attached.

Concur with Checklist. - TW

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]

The nearest Transit Route occurs at 7th Street and Prairie Street, approximately 0.8 miles north of the site.

Concur with Checklist. - TW

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]

A minimum of 2 parking spaces will be required on each lot upon development. The project will not be adding or removing any parking spaces.

Concur with Checklist. - TW

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]

Concur with Checklist. - TW

The project will include: 1,046 LF of extension to Comfort Way, 624 LF extension To Rolling Hills Way, a 266-foot side street (Comfort Ct.) and two Cul-de-Sacs.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]

No

Concur with Checklist. - TW

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]

Per the Traffic study, the proposal, at full Buildout, will likely generate 293 Trips per day, with Peak Am traffic of 23 trips and Peak PM Traffic of 31 Trips.

Concur with Checklist. - TW

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]

No

Concur with Checklist. - TW

h. Proposed measures to reduce or control transportation impacts, if any: [help]

Capital facility fees charged at the time of Building permit issuance will be sufficient to provide any mitigation related to traffic impacts.

Concur that Transportation Impact Fees will be paid at the time of building permit issuance. - TW

15. **Public Services** [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]

No. The project is located within a residential neighborhood of the City of Sequim. All required services are available or planned for.

Concur with Checklist. - TW

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]

City of Sequim development fees ensure adequate funds at the time of development to cover any capital facility costs generated by the new demand resulting from the project. No additional mitigation is necessary.

Concur with Checklist. - TW

16. **Utilities** [help]

a. Check the utilities currently available at the site: [help]
☒ electricity, ☐ natural gas, ☒ water, ☒ refuse service, ☒ telephone, ☒ sanitary sewer, ☐ septic system, ☒ other Irrigation

Concur with Checklist. - TW

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]

City of Sequim Municipal Sewer service and Water Service, PUD #1 of Clallam County electrical, WAve Broadband Cable service, and Highland Irrigation District for irrigation water

Concur with Checklist. - TW

C. Signature [help]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Bruce W. Emery

Name of signee Bruce Emery

Position and Agency/Organization Project Manager/Green Crow Investments Co., LLC

Date Submitted: _____

Exhibit 7.a

JAMESTOWN S'KLALLAM TRIBE
1033 Old Blyn Highway, Sequim, WA 98382 360/683-1109 FAX 360/681-4643

ATTN: Tim Woolett
Senior Planner, Department of Community Development
City of Sequim
Re: SUB19-001

October 18, 2019

Mr. Woolett,

The Jamestown S'Klallam Tribe has received a request for comments on a 33-lot residential development south of Sequim. The Tribe has no information regarding cultural resources within the project area at this time. However, due to the project's location in a relict paleo-channel of the Dungeness River, the Tribe encourages the developer to ensure all contractors have an Inadvertent Discovery Plan available, in the event that cultural materials are uncovered during ground disturbing activities.

Should the scope change or if new data is revealed during implementation, please let us know. Thank you for the opportunity to comment on this project. If you need any additional information, please contact me at 360-681-4638 or dbrownell@jamestowntribe.org .

Sincerely,

David Brownell
Tribal Historic Preservation Officer
Jamestown S'Klallam Tribe

Exhibit 7.b.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

October 25, 2019

Barry Berezowsky, Director
City of Sequim
Department of Community Development
152 West Cedar Street
Sequim, WA 98382-3317

Dear Barry Berezowsky:

Thank you for the opportunity to comment on the optional determination of nonsignificance/notice of application for the Home / Phase B 33-lot Subdivision Project (SUB19-001) as proposed by Green Crow Investments Company, LLC. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

WATER QUALITY/WATERSHED RESOURCES UNIT:
Chris Montague-Breakwell (360) 407-6364

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or stormdrains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

Construction Stormwater General Permit:
The proposed construction activities of the Home / Phase B 33-lot Subdivision Project may require coverage under the Construction Stormwater General Permit (CSGP). Construction site operators must apply for a permit at least 60 days prior to discharging stormwater from construction activities and must submit it on or before the date of the first public notice. The applicant may apply online or obtain an application from Ecology's website at: http://www.ecy.wa.gov/programs/wq/stormwater/construction/ - Application.

If there are known soil/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted.

SOLID WASTE MANAGEMENT: Derek Rockett (360) 407-6287

All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from the local jurisdictional health department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the local jurisdictional health department for proper management of these materials.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(MLD: 201905695)

cc: Derek Rockett, SWM
Chris Montague-Breakwell, WQ
Bruce Emery, Green Crow Investments Company, LLC (Proponent)

Exhibit 7.c.

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

November 20, 2019

Mr. Barry Berezowsky
City of Sequim
152 W Cedar Street
Sequim, WA 98382

In future correspondence please refer to:
Project Tracking Code: 2019-11-08769
Property: City of Sequim Green Crow Home Subdivision Phase B
Re: Archaeology - Survey Requested

Dear Mr. Berezowsky:

The Washington State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) was contacted by Bruce Emery of Green Crow Investments and provided documentation regarding the above referenced project. As a result of our review, our professional opinion is that the project area has the potential to contain archaeological resources. The project area is has been determined to be at high risk of containing archaeological resources according to the DAHP predictive model, and similar areas in Sequim have yielded significant archaeological finds. Therefore, we recommend a professional archaeological survey of the project area be conducted prior to ground disturbing activities. We also recommend consultation with the concerned Tribes' cultural committees and staff regarding cultural resource issues.

The scale of the proposed ground disturbing actions would destroy any archaeological resources present. Identification during construction is not a recommended detection method because inadvertent discoveries often result in costly construction delays and damage to the resource. Conducting an archaeological survey in advance of the subdivision project will lower the risk of making inadvertent discoveries and thus causing construction delays and any associated costs.

These comments are based on the information available at the time of this review and on behalf of the SHPO in conformance with Washington State law. Should additional information become available, our assessment may be revised.

Finally, please note that in order to streamline our responses, DAHP requires that all documents related to project reviews be submitted electronically. Correspondence, reports, notices, photos, etc. must now be submitted in PDF or JPG format. Site/Isolate and Historic Property Inventory forms must be entered directly into the online WISAARD system. Cultural Resource reports should be directly uploaded into the assigned WISAARD project. For assistance with the process please see the WISAARD tutorials on this page: https://dahp.wa.gov/project-review/wisaard-system

Thank you for the opportunity to comment on this project and we look forward to receiving the survey report. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is shared with any hired cultural resource consultants and is attached to any communications or submitted reports. Should you have any questions, please feel free to contact me.

Sincerely,



Stephanie Jolivette
Local Governments Archaeologist
(360) 586-3088
Stephanie.Jolivette@dahp.wa.gov

Exhibit 7.c.

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

November 20, 2019

Mr. Barry Berezowsky
City of Sequim
152 W Cedar Street
Sequim, WA 98382

In future correspondence please refer to:
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Property: City of Sequim Green Crow Home Subdivision Phase B
Re: Archaeology - Survey Requested

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Thank you for the opportunity to comment on this project and we look forward to receiving the survey report. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is shared with any hired cultural resource consultants and is attached to any communications or submitted reports. Should you have any questions, please feel free to contact me.

Sincerely,



Stephanie Jolivette
Local Governments Archaeologist
(360) 586-3088
Stephanie.Jolivette@dahp.wa.gov

Exhibit 7.d.

CITY OF SEQUIM

152 W. Cedar Street, Sequim, WA 98382
PH (360) 683-4139 FAX (360) 681-3448

MEMORANDUM

DATE: December 30, 2021

TO: Tim Woolett, Senior Planner

FROM: Shawnie Peters, Development Engineer

THRU: Don Ctibor, P.E., City Engineer

SUBJECT: Home Subdivision, Conditions for Phase B Site Construction Permit

SUB19-001

Plans Reviewed:

- Response to Pre-Plat Comments dated 6-1-2021 from Zenovic & Assoc
- Preliminary Stormwater Control Plan dated 6-1-2021 from Zenovic & Assoc
- Geotechnical Report dated 6-1-2021 from Zenovic & Assoc
- Preliminary Plat Plans dated 06-01-2021 from Zenovic & Assoc

Public Works has completed its review of the above referenced Subdivision and Preliminary Plat applications.

The following Conditions must be satisfactorily addressed in the Site Construction Permit application process before Public Works can recommend approval of the Site Construction Permit Application:

Plan Submittal:

1. Provide Stream and Wetland Assessment per SMC 18.80.060 - Legacy Ridge Critical Area Study completed 1-25-2018 identified four streams and five wetlands on or adjacent the site. Two of the streams identified cross over the property line of this project on the northeast boundary across the slope. These streams are classified as Type 5 stream requiring a 25' buffer. How will these streams and buffers, identified as Stream G and H and Tracts M and P on the Legacy Ridge Preliminary Plat Map, be continued onto this development?

2. Provide a Critical Area Special Study per SMC 18.80.060. "Landslide Hazard area" and 70% of the site as "Seismic Soil Area", 60% of site is in soil type 64 Sequim-McKenna-Mukilteo complex" which DNR classifies it as "Moderate to High Liquefaction Susceptibility", there are two class 5 streams entering the site on the northeast side from the 50% slope bounding the property, and standing water observed by this office up to 3' deep on the northeast boundary of the site.

SMC 18.80.060

A. Applications for land uses or developments proposed within critical areas must be filed with all the information requested on the application forms available from the department of community development. All developments proposed on lots or parcels which may contain or adjoin critical areas, as determined by the city, must be evaluated by the applicant to provide the information necessary for the department of community development to determine if and to what extent the site contains critical area characteristics. The department of community development director must make the determination to classify a site or portion of a site as critical area pursuant to the procedures set forth in SMC 18.80.045. For applications which are subject to review pursuant to SEPA, the appeal of a determination that a site is a critical area must be made pursuant to the SEPA appeals procedures as set forth in SMC Title 16.

B. Supporting Information Required.

1. All land uses and developments proposed on or adjacent to lots or parcels listed, identified, inventoried, classified or rated as critical areas must include supporting studies, prepared to describe the environmental limitations of the site. No construction activity, including clearing or grading, is permitted until the information required by this chapter is reviewed and approved by the city as adequate. Special environmental studies must include a comprehensive site inventory and analysis, a discussion of the potential impacts of the proposed development, and specific measures designed to mitigate any potential adverse environmental impacts of the applicant's proposal, both on site and off site, as follows:

a. A description of how the proposed development will or will not impact each of the following on the subject property and adjoining properties:

i. Erosion and landslide hazard,
ii. Seismic hazards,
iii. Drainage, surface and subsurface hydrology and water quality,
iv. Flood-prone areas,
v. Existing vegetation as it relates to steep slopes, soil stability and natural habitat,
vi. Locally unique landforms: ravines, marine bluffs, beaches and associated coastal-drift processes,
vii. Slopes greater than 40 percent,
viii. Wetlands, and
ix. Critical aquifer recharge areas pursuant to SMC 18.80.100;

3. Provide a Groundwater Mounding Analysis. Approximately 2/3 of the proposed lots are within the finer material (Mckenna & Mukilteo) near test pits #5, 6, and 7 which did show some evidence of perched groundwater (Reference Geotechnical Report). A groundwater mounding analysis shall be conducted in accordance with 2014 SWMMWW Volume III.3.3.8 Section 10.

4. Identify the Landslide Hazard Areas and identify setback and buffer requirements per *SMC 18.80.060 and 18.80.030.*

SMC 18.80.030 (L)"Landslide hazard areas"

2. Any area with a combination of:

a. Slopes 15 percent or steeper, and

b. Impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel), and

c. Springs or ground water seepage;

5. Provide an Updated Traffic Impact Analysis. An update TIA must be submitted.

Geotechnical:

6. Setback/Buffer from Toe of Slope. The recommendation in "3.7 Offsite Steep Slope" is a building *"setback of 15' from the property line. Adjacent to this slope is recommended. The setback will effectively maintain a minimum setback of 35' from the minimal landslide hazard area (defined as where the existing slope exceeds 40%)."* Revise the Landslide hazard Zone area to encompass slopes of 15% or greater per

SMC18.80.030, and define buffers and setbacks from the edge of the slope and from the streams identified above. For reference, Legacy Ridge has a 45-55' buffer from the top of slope to the building envelope, comprising of a 25'-35' "LOW GEO HAZARD SLOPE BUFFER" and a 20' Building Setback Line "BSBL PER THE GEOTECHNICAL REPORT". Does the Toe of Slope require similar?

Plans:

7. Relocate Driveways outside of Water Main Easement. Lots 52 and 54 show the driveway within the water main easement, relocate this driveway to outside of the WML easement.

8. Show the Highland Irrigation Ditch as required by RCW 58.17.310. The Highland Irrigation District will be contacted as part of the application review process to ensure that provision is made for irrigation right-of-way. Show the location of the existing irrigation (Highland Irrigation District) facilities, specifically at parcel 15, 52, 53 and 55. Provide documentation from Highland Irrigation District showing coordination and confirmation of the irrigation ditch being abandoned.

   RCW 58.17.310
   Application for approval of plat within irrigation district—Approval without provision for irrigation prohibited.
   (1) Whenever a city, town, or county receives an application for the approval of a plat of a subdivision that lies in whole or in part in an irrigation district organized pursuant to chapter 87.03 RCW, the responsible administrator shall give written notice of the application, including a legal description of the short subdivision and a location map, to the irrigation district. The irrigation district shall, after receiving the notice, submit to the responsible administrator who furnished the notice a statement with any information or conditions for approval that the irrigation district deems to be necessary regarding the proposed division's effect upon the structural integrity, including lateral support, of the irrigation district facilities, other risk exposures, and the safety of the public and irrigation district.

Phasing:

9. The City of Sequim's Development Standards state that all phases of a development or subdivision must be up to city standards as stand-alone developments. This ensures that if only, for example, Phase B-1 or B-3 of the project is completed, the resulting utilities function independently to city standards. Please illustrate each phase will be stand-alone for all utilities and access. Please specifically address storm water drainage and two-points of access.

   SMC 17.26.030 (A)
   1. Illustrative maps for each proposed phase which clearly mark in heavy lines the boundaries of the subject phase, label the phase alphabetically (to avoid confusion with lot numbers), and depict roads, lots, infrastructure, easements, dedications and open space which are included within the subject phase. The plan must also illustrate those proposed improvements which mitigate impacts associated with the unbuilt portions of the project which are not located within the boundaries of the subject phase. Previously established phases, including roads, lots, infrastructure, easements, dedications, and open space, should be shown on the map shaded or gray-scaled. All phasing maps must be drawn at the same scale.

   2. A narrative description or table which describes each phase and its associated improvements. In addition, the narrative or table must demonstrate that each phase would comprise a "stand-alone" development which, should no subsequent phases be constructed, would meet or exceed the standards of this title and all other conditions of approval. The narrative should also describe the proposed timeline for completion of the entire project and any proposals to bond for required unbuilt or yet-to-be-constructed improvements.

Stormwater:

10. General: The project has a contributing area of 9.14 acres and the right-of-way has a contributing area of 2.4 acres. The detailed approach for design of infiltration facilities shall be used for projects greater than 1 acre. See SMC13.104 and the 2012 Stormwater Management Manual for Western Washington (Amended 2014) lume III.

11. O & M for existing 24" Stormwater Catchment System on SE property line. Include further discussion of the existing stormwater drainage system in place within the boundary of the proposed development. Who owns and maintains both during and post development? The facilities referenced in this comment are currently shown within the proposed boundary on Drawing C003 along the southwestern property line. Legacy Ridge proposes to connect to this system for Stormwater Outfall. Has the additional flow being added to the system been taken into account? *The applicant stated the system is maintained by the HOA per AFN# 2018-1370366, however, this document does not directly address this existing system, nor does the Plat of Homes Phase A (V15 Pg41) show an easement or the stormwater line.*

12. Show swale, grading for swale, and a cross section: please show the proposed property lines, grade, existing stormwater location, swale location and vehicular access corridor. The Legacy Homes Subdivision shows sheet flow and dedicated drainage paths over the "Landslide Hazard Area" and onto the proposed development. Specifically, Parcels 58-63, 52, 53, 15, 55 and Lots 32 and 33 are directly impacted by the storm water runoff from this slope. Applicant stated a swale will collect this runoff.

13. A maintenance tract is to be created. This tract is to be along the northeast property line for the proposed swale, the existing stormwater system and vehicular access. The existing 24" stormwater system is shown to be maintained via a 10' easement along the southeast property line. This easement is inside or next to the 30-50' slope to the SE and on the northwest is bounded by proposed Parcels 58-63, 53, 15, 55 and Lots 33 and 32. This tract may need to be wider than 10' to accommodate vehicles, the new swale, and allow space for working on the stormwater system. Provide O&M for the stormwater existing facilities, and the swale that is proposed in this area. This tract can not be inside of the area defined as the "Landslide Hazard Zone".

Water:

14. The Phase B-3 Water Main as 10" in size to meet future build out requirements.

CITY OF SEQUIM

152 W. Cedar Street, Sequim, WA 98382
PH (360) 683-4139 FAX (360) 681-3448

MEMORANDUM

DATE: January 13, 2022

TO: Tim Woolett, Senior Planner

FROM: Shawnie Peters, Development Engineer

THRU: Don Ctibor, P.E., City Engineer

SUBJECT: Home Subdivision, Conditions for Phase B Site Construction Permit

SUB19-001

Plans Reviewed:

- Response to Conditions dated 01-11-2022 from North Point Construction
- Response to Pre-Plat Comments dated 6-1-2021 from Zenovic & Assoc
- Preliminary Stormwater Control Plan dated 6-1-2021 from Zenovic & Assoc
- Geotechnical Report dated 6-1-2021 from Zenovic & Assoc
- Preliminary Plat Plans dated 06-01-2021 from Zenovic & Assoc
- Traffic Impact Analysis – Addendum dated 03-16-2020
- Traffic Impact Analysis dated 10-04-2018

Public Works has completed its review of the above referenced Subdivision and Preliminary Plat applications.

The following Conditions must be satisfactorily addressed in the Site Construction Permit application process before Public Works can recommend approval of the Site Construction Permit Application:

Plan Submittal:

1. Provide Stream and Wetland Assessment by a qualified professional specializing in wetlands or related per SMC 18.80.060.

2. Provide an approved Critical Area Special Study by a qualified professional specializing in critical areas or related per SMC 18.80.060**.**

3. Provide a Groundwater Mounding Analysis or approved alternative or design approved by the City Engineer. SMC 13.104

4. Identify the Landslide Hazard Areas, landslide hazard area buffer tract as well as setbacks for any structures per SMC 18.80.060 and 18.80.030.

5. Provide an approved Traffic Impact Analysis.

Geotechnical:

6. Provide delineation of landslide hazard zone area, buffer tracts and setbacks consistent with SMC18.80.030.

Plans:

7. Relocate Driveways outside of Water Main Easement.

8. Show the Highland Irrigation Ditch as required by RCW 58.17.310. Provide documentation from Highland Irrigation District showing coordination and approval of submitted plans.

Phasing:

9. Provide a phasing plan showing each phase of the development will be up to city standards as stand-alone developments. SMC 17.26.030 (A)

Stormwater:

10. The detailed approach for design of infiltration facilities shall be used for projects greater than 1 acre. SMC13.104

11. Specify how individual lot stormwater will be infiltrated on site for each lot. SMC 13.104

12. Provide ownership information and an Operation and Maintenance agreement for the existing 24" Stormwater Catchment System on SE property line.

13. Provide details, grading, and a cross section for the proposed swale adjacent the east boundary.

14. A maintenance tract is to be created to serve the existing 24" stormwater system adjacent the east boundary.

Water:

15. Homes B Phase 3 Water Main shall be 10" in size due to anticipated build out requirements. City code requires a minimum of an 8" water main. The City is open to consideration of a Cost Sharing and Latecomers agreements to offset the extra cost to the developer.

16. A connection is not allowed to the existing 24" Diameter Transmission Water Main that traverses the south end of the development. This water is considered untreated and is not suitable for domestic use without further treatment at the Reservoir Rd water treatment facility.

17. Fire Hydrant spacing shall be in accordance with the 2015 International Fire Code (IFC), Appendix C.

Third Party Review

18. The sewer, water, and stormwater designs; Geotechnical report, Critical area study, Traffic Impact Analysis and possibly other elements of the submitted site construction permit application will be reviewed by a third party (peer) engineering entity for compliance with city codes and standards and impact upon the city's overall utility system from a capacity and life safety standpoint. The cost of this service is will be payable by the developer. The city will seek authorization from the developer and collect a deposit before directing the third party to perform the reviews.

Exhibit 8.a.

Cherry Blossom Estates
Homeowners Association

121 Petal Lane
Sequim, WA 98382

Bill Miano, President
360.305.9045
miano5@olypen.com

Deborah McKean, Secretary
303.877.6160
dmck5280@gmail.com

Norm Drewett, Vice-President
760.822.1349
normdrewett@gmail.com

David Talley, Treasurer
210.834.4234
david@dmtalley.com

David Rise, At Large
406.465.1543
davidrise4@yahoo.com

11 October 2019

To: City of Sequim Planning

From: Cherry Blossom Estates HOA Board of Directors

Subj: Your letter dated October 8 2019 IRT Home Estates - Phase B Subdivision

Our concerns about flooding and traffic written to you about the Legacy Ridge development remain germane to this extension of Home Estates.

It is our understanding that Sequim City Planning approves engineering plans, related to our concerns, only to the border of the development and does not consider the negative impact on downstream established developments.
This concern originally came to our attention when you approved the drainage plan for Home Estates that allowed them to dump their rain water runoff from a 24 inch culvert into a ditch owned and maintained by Cherry Blossom Estates (CBE) without any consideration of downstream flooding potential. That ditch is located along the eastern boundary of our development and crosses under the sidewalk through an 8 inch culvert that was adequate when CBE was developed and is now inadequate due to your approval of Home and Legacy Ridge developments additional rain water runoff.

Please include the resizing of that 8 inch culvert into your approval of the Home Estates Phase B Subdivision.

Respectfully submitted,

William Miano
Cherry Blossom Estates HOA, President

Exhibit 8.b

October 22, 2019

City of Sequim - Department of Community Development 152 W. Cedar St. Sequim, WA 98382

RE: SUB 19-001, HOME subdivision Phase B - PUBLIC COMMENTS

To whom it may concern:

Thanks to the continued and ongoing ravaging of its farmlands, with developers openly encouraged and obviously given free rein by the city of Sequim, there is nothing to distinguish Sequim from any other rapidly growing area. Sequim already suffers from a lack of character and to keep building MORE houses in MORE identical developments with MORE big box stores will hardly enchance any character Sequim might have left. At one time, Sequim's character was its farms, the Dungeness river and temperate rain shadow climate. Now it's centered on gambling, biking, golfing, pickleball, medical facilities and big box store shopping. This is hardly a worthy legacy to pass on to future generations of Sequim.

People are attracted to the area because of its proximity to the Olympic Mountains, its mild weather and its nationally advertised cachet as a retirement mecca. Retired people eventually die and then what's left? Countless empty houses in developments that are hardly affordable to those young people just starting out. Sequim does NOT need more houses in the $400 K and over range, which I imagine the 33 houses in this HOME subdivision will be, as well as the 90+ houses (LEGACY subdivision) planned for behind the HOME subdivision. What Sequim sorely needs are houses in the $200 to $300K range. Hardly a peep is heard about this need, let alone homes for the homeless.

Are you sure the city of Sequim has the infrastructure to accomodate the influx of people for these new developments? It's impossible to go anywhere in Sequim in the afternoon. Sequim traffic on its' major thoroughfares rivals Port Angeles, yet Sequim has a smaller population. How is this possible, despite the Sequim bypass?

Sequim is already littered with an oveabundance of empty and abandoned housing developments. Why do you have to build MORE? When is enough finally enough? When there's no green space left anywhere because it was all sold to the highest bidder? Won't that be a wonderful world? I don't want to live there.

Your neighbor,

Kristina Hinkle

34 E. Pheasant Lane

Sequim, Washington 98382

RECEIVED
OCT 25 2019
City of Sequim, DCD/PW

Exhibit 8.c

RECEIVED
OCT 28 2019
City of Sequim, DCD/PW

To: Barry Berezowsky

Director, Department of Community development

City of Sequim, Sequim, WA, 98382

From: Cathy and Dan Wagner

81 Summerset court

Sequim Wa 98382

Concerns with regard to Application **Home phase B: file no. sub19-001**

Dear Sir,

We would like to express concerns regarding more development in this general area of 7th ave and Silberhorn.

Water availability and quality

If the water supply is going to come from the Aquifer that supplies the Silberhorn area, managed by PUD, this is not sufficient. According to the Dungeness Watershed lecture at the Sequim Civic Center on Wed Oct 23rd, the outdated graphs that were shown were showing a drop in our Aquifer. In July and August, the water pressure is very weak and we are afraid that with all this development, is any agency really keeping an eye on the resources? We inspect our PUD report every time it comes out and notice that the nitrate levels are rising.

Traffic Flows

There are minimal sidewalks along Silberhorn with lots of foot and bicycle traffic. The School buses have stops on this street. During wet weather or snowy weather, people are walking in the street, in the dark. I am one of them.

Thank you for this opportunity to share my concerns.

Yours Sincerely,

Cathy and Dan Wagner

Dan Wagner
Catherine Wagner

Exhibit 8.d.

RECEIVED
OCT 29 2019
City of Sequim, DCD/PW

Dear Sir/Madam,

I appreciate the opportunity to comment on the proposed Home Phase B Subdivision. I would also like to commend the development plans, as, if I read them correctly, they propose preserving the existing oak grove as open space.

Native grasslands and oak savanna are ecologically and culturally significant. Native tribes perpetuated these communities via prescribed fire, tilling and planting to increase the abundance of root foods (camas, onion, *Lomatium*) game, berries, seeds, fiber, medicines, dyes, perfumes, adhesives and flavorings (Gunther 1973, Beckwith 2004, Sharpe 2019). The sites also harbor many species of distinctive and rarified biota. Prairies are also aesthetically pleasing; "On the north side of the Sequim prairie is a bluff...the top providing one of the most beautiful landscape views I have ever seen in this country" Swan (1861).

Prairies and oak savanna communities have been greatly diminished in the Cascadia Ecoregion (western Washington, Oregon & SW British Columbia) with only 5% remaining of these habitat types. The S'Klallam people's subsistence patterns began to suffer in 1775 from infectious diseases, which arrived via Spanish ships (Boyd 1999). Furthermore, the first white settlers (early 1850's) prized Sequim's prairie lands, as they provided well-drained, non-forested lands for grazing and cropping (Gorsline 1992, Keeting 1976). However, after a century and a half of intensive livestock grazing, irrigation, invasive plants, habitat conversion, road construction, housing and the exclusion of fire have greatly diminished these habitats. In a recent study by US Forest Service biologists David Peter and Stan Graham (2018) they note: "This is the case with all prairie habitats throughout the Olympic Peninsula, species ranges have retracted—not spread. The Sequim prairies are now in extremely poor condition, indeed, most are now extinct".

Consequently, the remaining Sequim oak groves, and their understories, are of great conservation value. As such, I would kindly like to submit the following recommendations to further preserve the ecological integrity of the site:

- The rock piles around the base of the trees are culturally significant as they epitomize the early European settlement phase (field clearing). These rock mounds also harbor native plants, and as such, should remain minimally disturbed (i.e., not be leveled for lawns or used for construction materials).

- Native plants have also been found across Comfort Road in parcels 58, 59 and the adjacent unmarked parcels to the SE (Peter and Graham 2018). Consequently, I am recommending that prior to site development, volunteer botanists be allowed to locate and dig bulbs from these adjacent parcels and transplant them across the street to the oak grove in open space.

• In order to minimize damage to the oak trees, I am recommending the construction of sidewalks/roads that are meandering, bridged and/or by implementing the use of geogrids and gravel bases (Costello and Jones 2003).

• Retain the natural character of the open space by not grooming and planting non-native grasses and other vegetation, as this site affords a unique opportunity to educate the future residences on the value of native prairies. By "not grooming" I do not necessarily mean not mowing, as prairie species require the simulation of fire and grazing, which in modern times can be done mechanically by mowing and weed eating. This area could indeed be enhanced by planting native prairie species and removing exotics.

Thanks again for preserving the aesthetic, biological and culturally significant grove of oaks in the Home Phase B Subdivision. With some modest modifications to the site plan, this grove, and its understory of native plants, will make a significant contribution to the small but growing network of natural areas on the Sequim Prairie. By maintaining and enhancing the existing natural savanna conditions in open space, Green Crow is holing true to the company's ethos of "being environmentally sensitive stewards of our lands'.

Thanks again for the opportunity to comment on this project. Please do not hesitate to get in touch with any questions.

Sincerely yours,

Fred Sharpe Ph.D.
1603 S Golf Course Road
Port Angeles, WA
98362
360.808.0579
fsharpe@alaskawhalefoundation.org

References:

Beckwith BR. 2004. "The Queen Root of the Clime" Ethnoecological investigations of blue camas (*Camassia leichtlinii* and *C. quamash*) and its landscaepes on southern Vancouver Island, BC. University of Victoria.

Boyd RT. 1999. *The Coming of the Spirit of Pestilence: introduced infectious diseases and population decline among Northwest Indians, 1774-1874*. University of Washington Press. Seattle.

Gorsline J. 1992. *The cultural transformation of the Sequim Prairie. In Shadows of our ancestors: readings in the history of Klallam-white relations (Dalmo'ma).* Empty Bowl Press.

Gunther E. 1927. *Klallam ethnobotany*. Univ. Wash. Pub. Anthropology. 1(5) Seattle.

Keeting V. 1976. *Dungeness: The lure of a river, a bicentennial history of the east end of Clallam County.* The Sequim Bicentennial Committee and the Peninsula Daily News, Port Angeles, WA.

Peter D and Graham S. 2018. Notes concerning the Sequim Prairies based on the USFS Pacific Northwest Research Station, Olympia.

Costello LR and Jones KS. 2003. Reducing Infrastructure Damage by Tree Roots: A Compendium of Strategies. Western Chapter of the International Society of Arboriculture, Cohasseet, CA.

Sharpe FA. 2019. The story of camas and the Sequim Prairie. Unpublished study. Port Angeles Wa.

Swan 1861. Sequim Prairie. Washington Territory. Washington Standard. Vol. 1:15.

Tim Woolett

From: bschneider@rv-ing4life.com
Sent: Thursday, January 13, 2022 1:06 PM
To: Tim Woolett
Cc: Ben Fisher
Subject: Home Estates Phase B Construction Concerns

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

As a concerned property owner of Home Estates Subdivision, I agree with the concerns already expressed by our HOA President Ben Fisher regarding the planned construction of Home Estates Phase B. The increased traffic to the Phase B properties through our private streets puts an unfair maintenance burden on the current property owners. This situation has been created by the City of Sequim requiring the Phase B streets to be city owned, effectively making Phase B an "island". Our private streets are in good repair and wide enough to accommodate emergency and service vehicles. Consequently, there would be no immediate financial burden to the City in assuming responsibility. The City of Sequim needs to take ownership and future maintenance responsibilities for Rolling Hills Way, Jara Way, and Comfort Way to correct this unusual street configuration.

The City Utilities Department is also aware of the uncontrolled flooding on Rolling Hills Way three years ago, from run-off upland and across the Phase B property. Several homes had to bear the expenses associated with crawl space flooding. This required the installation of sump pump systems and the replacement of wet under floor insulation in some cases. This was a financial burden to those home owners which does not need to be repeated. Unfortunately, there is a larger storm drain issue affecting not only Home Estates, but Cherry Blossom Estates as well. The current storm drain system is marginally adequate without the additional burden of storm water run-off from the proposed Phase B development of 33 additional homes. The storm water run-off needs to be addressed now and not put off for future resolution. It will only be more difficult and more expensive to solve in the future.

The last item which has affected me financially, is the current low water pressure. I had to have the plumber who was the sub-contractor on my home construction three years ago, replace the original hose bibs. The high quality hose bibs originally installed would not operate without annoying harmonics due to low water pressure. This may sound minor, but it is a reflection of a larger problem depending on where your property is on the current water supply line and how much use there is upstream.

I am not against the development of Phase B, but would like the Planning Commission to require resolution to the above issues before moving ahead and approving the development of Home Estates Phase B.

Thank you for considering our concerns,

William & Susan Schneider
90 Rolling Hills Way
Sequim, WA 83828
(360) 620-3870

Exhibit 8.f.
Attachement

Here are a few points David and I have made to the city. You could copy these or put them into your own words. Please make sure you give your name and address in the body of your message.

1. Public/private streets: the neighborhood supports having the City take ownership of Comfort Way, Jara Way, and Rolling Hills Way. Our streets are in very good shape, and it should not be a burden for the City to maintain the streets for Phase A as well as Phase B. It is in the best interest of the City to own these streets rather than create “road islands” where a private street is the only connection to a public one.

2. Water pressure: the water pressure in the neighborhood is not ideal at the moment, and there is concern in the neighborhood about the effect of the new development. We understand that North Pointe has plans to improve the water pressure for the whole area, but we haven’t seen the specific plans. Please ensure that the water pressure issue is addressed satisfactorily as a condition of this permit.

3. Construction hours: North Pointe agreed verbally to set the construction hours as 7am to 7pm Monday through Friday, and 8am to 4pm Saturday, with no work on Sundays or holidays. We would like to make sure this is clearly documented.

4. Completion of streets: North Pointe should complete the streets before any homes can be sold and occupied, for the safety of the neighborhood and in the event that North Point decides to halt construction of subsequent phases of Part B.

5. Road condition: we would like to make sure that any damage to our roads is noted, and that North Pointe will commit to maintaining the roads in as good or better condition as prior to construction. While they plan to use Comfort Way for all access, it is likely that both Jara Way and Rolling Hills Way will also be used by construction vehicles, and those roads should be maintained as well.

6. Water runoff to Jara Way: our homes on Jara Way are below the slope of the land for Phase B, and we are concerned about water runoff into our back yards and further north. We have not seen any specific plans on how this will be managed.

7. The City needs to determine ownership and responsibility of the 24” storm catchment system on the SE property line. If it is indeed the responsibility of the Home Association to maintain that line the developer should be required to inspect and repair the line to City standards and provide as built maps as well as an O&M manual to the HOA. It should not be Home HOA’s responsibility to assume maintenance until/unless it is in optimal condition.

8. I did not see a cluster for mailboxes in the plans on the City website. Please advise us of where the mailboxes are to be installed. If the plan is to install them at or near the current mailbox location the developer should be responsible for providing a dark sky light at the location to provide safety lighting for people accessing the mailbox kiosks after dark.

One other note: everyone in the neighborhood received a letter in the mail with information on the Planning Commission meeting on the 4th, but the Zoom link in the letter is not correct. I checked on Jan 3 and the Planning Commission web site did not yet have the agenda posted for the Jan 4 meeting. There should be some effort made to ensure that the information provided in these public meeting notices is accurate.

Exhibit 8.f.

Tim Woolett

From: susyso@frontier.com
Sent: Thursday, January 13, 2022 12:45 PM
To: Tim Woolett
Subject: FW: Homes Phase B development planning
Attachments: Phase B Comment template.docx

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

From: susyso@frontier.com <susyso@frontier.com>
Sent: Thursday, January 13, 2022 11:21 AM
To: 'twoolett@sequim.com' <twoolett@sequim.com>
Cc: 'Ben Fisher' <ben@toadly.com>
Subject: FW: Homes Phase B development planning

Dear Mr. Woolett,
My wife, Susy So, and I live at 71 Jara Way. We concur will all the concerns noted in Mr. Fisher's and Mr. Meissner's attached memo. Of particular interest to us is dedicating the private streets, water pressure and drainage and runoff concerns. Thank you for your consideration.
Brian Pickering

From: Ben Fisher <ben@toadly.com>
Sent: Thursday, January 13, 2022 11:00 AM
Cc: David Meissner <dmeis99@gmail.com>; Cliff Ayers <wyolong@gmail.com>; Shawn Albert Shepard <shawnalbertshepard@gmail.com>; Ben Fisher <ben@toadly.com>
Subject: Homes Phase B development planning

> Folks, David and I attended the January 4 Planning Commission hearing on the Phase B subdivision. The Commission had some questions and concerns that weren't fully addressed, so their decision has been put off until their next meeting, tentatively January 18 at 6 PM. David and I have expressed that we would like the City to take ownership of Comfort Way, Jara Way, and Rolling Hills and we had some concerns about times of construction, drainage, and other stuff. The Commission wants to know if we all feel this way. This is your opportunity to express your opinion, and it's important for you to do so. We've attached a template that covers most of our concerns. You may find it easier to just copy this in an email or letter, or send something in your own words. Either way, the sooner they can receive it the better.
>
> You can send paper copies in the mail to the city. The address is 152 West Cedar St, Sequim WA 98382. You can also send an email to Tim Woolett, City Planner at twoolett@sequimwa.gov . Time is of the essence, so the sooner you can do this the better.
>
> Thanks. I hope you can find the time to weigh in on this prior to the meeting.
>
> Ben

Exhibit 8.g

Tim Woolett

From: judygauderman@aol.com
Sent: Thursday, January 13, 2022 12:21 PM
To: Tim Woolett
Subject: Home Estates - Phase B - Sequim WA

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

TO: Tim Woolett, City Planner, CITY OF SEQUIM

FROM: Judy Gauderman, 91 Jara Way, Sequim, WA - 360-504-2733

RE: Home Estates - Phase B - Sequim, WA

DATE: January 13, 2022

Water pressure: On my property **(91 Jara Way)** the water pressure is extremely low - a trickle, and there is concern in the neighborhood about the effect of the new development. I understand that North Pointe has plans to improve the water pressure for the whole area, but have not seen the specific plans. **Please ensure that the water pressure issue is addressed satisfactorily as a condition of this permit.**

Completion of streets: North Pointe should complete the streets before any homes can be sold and occupied, for the safety of the neighborhood and in the event that North Point decides to halt construction of subsequent phases of Part B which is entirely possible. **There have been many delays in the past 4 years!**

Road condition: We would like to make sure that any damage to our roads is noted, and that North Pointe will commit to maintaining the roads in as good or better condition as prior to construction. **They must use only Comfort Way for all access. There should be no access on Jara Way and Rolling Hills Way.**

Water runoff to Jara Way: My home on Jara Way is below the slope of the land for Phase B, and we are concerned about water runoff into our back yards and further north. **We must see specific plans on how this will be managed.**

MR. WOOLETT, PLEASE LET ME KNOW. YOU RECEIVED THIS EMAIL. THANK YOU.

Exhibit 8.h.

Tim Woolett

From: wyolong@gmail.com
Sent: Thursday, January 13, 2022 11:29 AM
To: Tim Woolett
Subject: Concerns for North Pointe Development South of Jara Way, Sequim, WA

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

Clifford Ayres
91 Rolling Hills Way
Sequim, WA 98382-3622

Dear Planning Commision,
Please consider the following points with which I agree.

1. Public/private streets: the neighborhood supports having the City take ownership of Comfort Way, Jara Way, and Rolling Hills Way. Our streets are in very good shape, and it should not be a burden for the City to maintain the streets for Phase A as well as Phase B. It is in the best interest of the City to own these streets rather than create “road islands” where a private street is the only connection to a public one.

2. Water pressure: the water pressure in the neighborhood is not ideal at the moment, and there is concern in the neighborhood about the effect of the new development. We understand that North Pointe has plans to improve the water pressure for the whole area, but we haven’t seen the specific plans. Please ensure that the water pressure issue is addressed satisfactorily as a condition of this permit.

3. Construction hours: North Pointe agreed verbally to set the construction hours as 7am to 7pm Monday through Friday, and 8am to 4pm Saturday, with no work on Sundays or holidays. We would like to make sure this is clearly documented.

4. Completion of streets: North Pointe should complete the streets before any homes can be sold and occupied, for the safety of the neighborhood and in the event that North Point decides to halt construction of subsequent phases of Part B.

5. Road condition: we would like to make sure that any damage to our roads is noted, and that North Pointe will commit to maintaining the roads in as good or better condition as prior to construction. While they plan to use Comfort Way for all access, it is likely that both Jara Way and Rolling Hills Way will also be used by construction vehicles, and those roads should be maintained as well.

6. Water runoff to Jara Way: our homes on Jara Way are below the slope of the land for Phase B, and we are concerned about water runoff into our back yards and further north. We have not seen any specific plans on how this will be managed.

7. The City needs to determine ownership and responsibility of the 24” storm catchment system on the SE property line. If it is indeed the responsibility of the Home Association to maintain that line the developer should be required to inspect and repair the line to City standards and provide as built maps as well as an O&M manual to the HOA. It should not be Home HOA’s responsibility to assume maintenance until/unless it is in optimal condition.

8. I did not see a cluster for mailboxes in the plans on the City website. Please advise us of where the mailboxes are to be installed. If the plan is to install them at or near the current mailbox location the developer

should be responsible for providing a dark sky light at the location to provide safety lighting for people accessing the mailbox kiosks after dark.

Exhibit 8.i.

Tim Woolett

From: Mary Flagg <marehead@gmail.com>
Sent: Monday, January 10, 2022 10:42 AM
To: Tim Woolett; Don Ctibor
Cc: Ben Fisher; Haus Sue; Beth & Ed Anders
Subject: January 4, 2022 Planning Commission Meeting

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

My name is Mary Flagg living at 40 Jara Way in Sequim's Home Estates Subdivision.

After hearing a brief synopsis of the January 4, 2022 Planning Commission meeting I am following up with some concerns regarding this plan.

Please refer to the emails submitted by Ben Fisher the President for the Home Estates HOA addressing some of the following concerns:

1) The ownership of Comfort Way, Jara Way and Rolling Hills Way when this development is added to the neighborhood.

2) Completion of all the streets in the new development prior to any homes being occupied.

3) Improvements in the water pressure for the entire neighborhood with these additional dwellings being added. We were assured by North Pointe that this is part of the plan but apparently was not addressed at the meeting.

4) Drainage issues with this new development's elevation being above the existing homes on the south side of Jara Way. We were assured this would be addressed in the plans but apparently was not presented during the planning meeting. We need to be assured that this will be taken care of before any homes are built.

5) There were other drainage issues pointed out in the emails that I am not aware of, but these also need to be addressed in the plans by North Pointe.

Thank you for your attention to these concerns.

Mary Flagg

Exhibit 8.j.

Tim Woolett

From: Ben Fisher <ben@toadly.com>
Sent: Monday, January 3, 2022 2:06 PM
To: Tim Woolett
Subject: Comments on Home B Preliminary Major Subdivision File Sub 19-001

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

I have reviewed the documents on the City website regarding the proposed subdivision and while in general I am in support of the plan I have the following comments:

Please ensure that the applicant and/or the city make some improvements to increase the water pressure in Home A and Home B as part of the construction plan. My understanding is that North Pointe intends to do this, but I have not seen it in writing.

It is also my understanding that North Pointe intends to have Comfort Way adopted by the City and made a city street. I request that the City also take ownership of Rolling Hills Way and Jara Way. This seems to be a natural development if the City intends to take ownership of Comfort Way.

As part of the approval process, the City should direct the applicant to complete the streets before any homes can be sold and occupied. Completion of the streets and connection to existing streets will make for a safer ingress/egress if there is an emergency.

Construction days and hours should be established as 7 AM - 7PM Monday through Friday, and 8 AM - 4 PM Saturday. Construction activities should not be allowed on Sundays and holidays.

My understanding is that the applicant intends to use Comfort Way as the ingress/egress for all construction activities. The applicant should be required to monitor the condition of the road and be responsible for maintaining the roads so that at the end of the project the road is in as good or better condition than prior to construction. If construction vehicles and equipment use Jara Way or Rolling Hills Way the same standards should apply.

Thank you for your attention

Ben Fisher,
10 Jara Way
Sequim, WA 98382

Exhibit 8.k.
Attachment

Home Subdivision Phase B
Summary of Public Meeting Presentation, Concerns, Questions and Outcomes
Green Crow Investments Co., LLC
October 30, 2019

The following is a brief summary of the Public Meeting that was held on October 29, 2019 at 6:00 PM in the City Council Chambers for the City of Sequim, to review and discuss a 33-lot subdivision proposal by Green Crow Investments Co., LLC.

1. **Meeting and process Summary**. The representative of Green Crow gave a brief summary of the meeting Agenda and the subdivision approval process.
2. **Project Summary**. The representative provided brief details on the project: 9.14 acres, 33 lots, located south of Home Subdivision Phase 1, studies completed to date, all streets will be public, Stormwater will be infiltrated on site.
3. **Specific Concerns**. The representative provided details on concerns that have already been expressed to them by members of the community: Possible impacts to private roads from construction equipment, possible impacts from stormwater, Impacts to the Garry Oak grove that exists on the property, and lack of adequate water pressure serving the immediate vicinity. The representative indicated that, to address these concerns, Green Crow would: limit construction access to the site to Comfort Way, document the current condition of the road, and repair any damage to the road created by construction vehicles; stormwater would be infiltrated via sand-lined trenches to maintain current hydrology and provide treatment before discharge into the ground; the Garry Oak grove would be protected by a designated open space area designed into the Plat, and; Green Crow would be required to address water pressure for the new development, which could involve the installation of a booster pump.
4. **Concerns expressed at the Meeting**. The following concerns were expressed during the discussion portion of the meeting:
    - Concern was expressed by an owner on Quail Run with respect to the proposed right-of-way extending west from Rolling Hills Way between Lots 25 and 45. The representative noted that City Policy required that future access points be planned for, such as the logical extension of Quail Run to the west of the project. However, it was noted that the right-of-way would not be required to be developed as part of the immediate plat, but would exist only if future need and circumstances dictated.
    - It was questioned whether the roadside ditches would be maintained by the City, or if they would become the responsibility of the Homeowners Association (HOA). No clear answer was known, but it was reiterated that the ditches would be part of the City right-of-way, which may give indication of the responsible party.

- Concern was expressed that development on those proposed lots that abut Phase A would create a visual problem with respect to the existing, neighboring lots located on the south side of Jara Way. Specifically, those lots were described as having been cut into the natural grade, resulting in a two to three-foot drop from the Phase B property. The concern is that the new homes might impede the aesthetic quality of the lots along Jara Way by being elevated—resulting in the feeling that they could "peer into their bedroom." The representative acknowledged this issue and indicated it wouldn't be desirable for either parties. The representative did indicate that Green Crow would consider the situation carefully. Options might include: grading the new lots to be compatible with the existing ones, incorporate fences or landscaping to achieve privacy without being too prominent.
- It was noted that a 15-foot wide path exists between Lots 31 & 32 of Phase A, presumably to provide for a future pathway between Phases A & B. The proposed design does not include a continuation of this path. It was speculated that the strip could be divided and deeded to the abutting owners. The representative did express a willingness to consider a continuation of the path if so desired by the community.
- It was asked how the new homes in Phase B would be compatible with those that exist in Phase A. The representative indicated the new homes would require Architectural review by the HOA as required in the CC&Rs. The Representative mentioned he thought the new homes would range from 1,800 SF to 2,400 SF. This statement was in error. Green Crow plans to maintain the same general square feet for buildings within Phase A for new development within Phase B and plans to comply fully with the requirements of the CC&Rs and architectural review.
- It was questioned where mailboxes for the new homes would be located. The representative thought they would be required to cluster the boxes along with the existing boxes on Comfort Way. It was asked whether a pullout for the mail carrier could be incorporated with the new boxes. The representative noted that the Postal Service would likely require a minimum pull-out access for the carrier.

The meeting was adjourned at 7:10 PM.

Respectfully,



Bruce Emery
Green Crow Investments Co., LLC

Exhibit 8.k.

Tim Woolett

From: Ben Fisher <ben@toadly.com>
Sent: Wednesday, January 5, 2022 11:46 AM
To: Tim Woolett
Cc: David Meissner; Ben Fisher; Shawn Shepard; C Ay
Subject: Comments regarding "Home B" Preliminary Major Subdivision File Sub 19-001
Attachments: Meeting Summary 102919 from Green Crow.pdf

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

Tim,

I've attached the following summary of the 2019 public meeting submitted by Bruce Emery of Green Crow (now North Pointe) In it he discusses that the developer will address the issue of water pressure. I did not see any reference to that in the staff report. Can you confirm that North Pointe will be required to make improvements to the water system to address our water pressure issue? Mr. Emery also discusses that the "roadside ditches" would be inside the City right of way. I assume that he is referring to the storm drainage plans. Can you confirm that, and can you confirm who will be responsible for the maintenance of those facilities?

Mr. Emery also acknowledges that there may be a two to three foot drop between the lots North Pointe plans to develop and homes along Jara Way. This could affect the aesthetic quality of the existing homes as well as contribute to a water run off issue during the wet season. I did not see in the staff report that this issue had been addressed. Please ensure that these issues are addressed prior to Commission and Council approval.

I did not see a cluster for mailboxes in the plans on the City website. Please advise me of where the mailboxes are to be installed. If the plan is to install them at or near the current mailbox location the developer should be responsible for providing a dark sky light at the location to provide safety lighting for people accessing the mailbox kiosks after dark.

As we discussed on the phone this morning, I am requesting that the City determine ownership and responsibility of the 24" storm catchment system on the SE property line. If it is indeed the responsibility of the Home Association to maintain that line the developer should be required to inspect and repair the line to City standards and provide as built maps as well as an O&M manual to the HOA. It should not be Home HOA's responsibility to assume maintenance until/unless it is in optimal condition.

I am again requesting that the developer be required to build out all roads in Phase B to City standards prior to selling any lots. This will allow for safe ingress/egress in case of emergency as well as ensure the roads will be built if future phases of construction are not completed. I also am requesting that the City adopt all roads in Home HOA rather than create road islands.

Thank you again for speaking with me.

Exhibit 8.I.

Tim Woolett

From: David Meissner <dmeis99@gmail.com>
Sent: Wednesday, January 5, 2022 7:56 AM
To: Tim Woolett
Subject: Comments, Home Phase B Preliminary Major Subdivision File Sub 19-001

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

Tim,

I am the Treasurer for the HOA for Home Estates, the subdivision discussed at the Planning Commission meeting on Tuesday evening. I was the person who spoke just before the Commission made the decision to delay approval of the North Pointe plan for Phase B.

I was surprised when you said that there have been no public comments on the plan since 2019. I know that Ben Fisher, our board President, submitted comments to you via email. I'm hoping this was just an oversight, and our comments are being received and will be taken under consideration.

The main concerns we have are:

1. Public/private streets: the neighborhood supports having the City take ownership of Comfort Way, Jara Way, and Rolling Hills Way. Our streets are in very good shape, and it should not be a burden for the City to maintain the streets for Phase A as well as Phase B.

2. Water pressure: the water pressure in the neighborhood is not ideal at the moment, and there is concern in the neighborhood about the effect of the new development. We understand that North Pointe has plans to improve the water pressure for the whole area, but we haven't seen the specific plans.

3. Construction hours: North Pointe agreed verbally to set the construction hours as 7am to 7pm Monday through Friday, and 8am to 4pm Saturday, with no work on Sundays or holidays. We would like to make sure this is clearly documented.

4. Completion of streets: North Pointe should complete the streets before any homes can be sold and occupied, for the safety of the neighborhood.

5. Road condition: we would like to make sure that any damage to our roads is noted, and that North Pointe will commit to maintaining the roads in as good or better condition as prior to construction. While they plan to use Comfort Way for all access, it is likely that both Jara Way and Rolling Hills Way will also be used by construction vehicles, and those roads should be maintained as well.

6. Water runoff to Jara Way: our homes on Jara Way are below the slope of the land for Phase B, and we are concerned about water runoff into our back yards. We have not seen any specific plans on how this will be managed.

One other note: everyone in the neighborhood received a letter in the mail with information on the Planning Commission meeting on the 4th, but the Zoom link in the letter is not correct. I checked on Jan 3 and the Planning Commission web site did not yet have the agenda posted for the Jan 4 meeting. When I was unable to join the meeting last night, I checked the web site again, and the agenda had been posted, with the correct Zoom link. So I was able to

attend the meeting, but it seems likely that other neighbors may have wanted to attend but could not. There should be some effort made to ensure that the information provided in these public meeting notices is accurate.

Thank you,
David Meissner
Treasurer, Home Property Owners Association
61 Jara Way
Sequim, WA 98382

Exhibit 8.m
Attachment

Tim Woolett

From: Patrick Benapfl <pfbenapfl@hotmail.com>
Sent: Tuesday, January 18, 2022 4:26 PM
To: Jeff Carter; Dan Butler; Elizabeth Hall; Karen Mahalick
Cc: Tim Woolett
Subject: Home Division B subdivision proposed by North Pointe Construction

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

Dear Members of the Planning Commission:

Why we are interested:

My wife and I live at 51 Jara Way. The property in question abuts our own to the south, and is actually a mere seventeen feet from the southern edge of our modest patio.

Firstly, a compliment:

North Pointe Construction, the company we have known as "Green Crow," has been an excellent neighbor, albeit that their property has been a 'vacant lot.' At our request, they have removed a pile of trash/junk that had been dumped on their property before our home was built. On numerous occasions, again at our request, they have mowed down the long grass on their property during the dry season, thus mitigating the danger of fire.

Our concerns:

1. Drainage. The manner our lot was graded level left it approximately 30 inches lower than the North Pointe property abutting our own. There are a couple of homes in the development just north of us (Cherry Blossom Estates) whose property suffered drainage from their neighbors, accumulating under their homes and requiring pumps and pipes and hoses, and doing considerable damage. We are most interested that such a thing does not happen to our home. Is it possible to get it in writing that North Pointe will pay for any repairs/damage done by water running down hill from their property through the half dozen lots bordering theirs?

2. Water pressure. Our entire subdivision suffers from poor water pressure. Shortly after moving in, I think every one of us has called the city to complain about the water pressure. The city measures it and declares it within an acceptable range. If it gets any worse, it will seriously affect our quality of life. We have been *promised* that something will be done to improve the water pressure before any expansion of the Home Estates development. Please, oh please, make sure this happens.

3. Ownership of the streets. It was a big surprise to me, having already moved in, that Jara Way was private. Of course we'd like to give ownership of our streets to the city. So far, they always have some reason why this won't happen. If the city is going to take over Comfort, I think it only fair that they take Jara Way and Rolling Hills as well.

4. That intersection of Seventh and Silberhorn is already dangerous. It sounds as if the occupants of the new development (and certainly the construction traffic) will flow through that intersection. It appears to be a simple thing that it be leveled and further controlled. Not to do so is playing with fire.

Thank you for your interest and consideration.

Patrick and Mary Helen Benapfl
Owners, 51 Jara Way
Sequim, WA 98382

pfbenapfl@hotmail.com

Exhibit 8.n
Attachment

Tim Woolett

From: John Akridge <jbadallas@gmail.com>
Sent: Sunday, January 16, 2022 5:31 PM
To: Tim Woolett
Subject: North Pointe/Greencrow development

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

Hello. The homeowners in Home Estates were asked to contact you regarding future development by North Pointe in our neighborhood. I live on 70 Jara Way and am a resident for the last 4 1/2 years.

I am not opposed to development if the infrastructure is there to support it, but right now the city services regarding storm water drainage, water pressure to existing homes, and even street maintenance is woefully lacking.

Since I've lived here, there has been flooding along Silberhorn and 7th Avenue. There is water that comes out of a spot marked sewer at the apartments off Silberhorn. Water flows out, not in, from the storm water drains at these apartments, on Rolling Hills and Comfort Way, and in the neighborhoods of Cherry Blossom and Aspen Creek. This is ongoing from when we have serious rain or snow for up to a month afterward. I'm pretty sure city drains aren't supposed to work this way. And no one is certain whether it's sewer water coming out of the several manholes marked sewer.

Part of the major drainage for this new development hooks into this same drainage system. The other part is basically an open ditch that runs from our neighborhood behind Cherry Blossom Estates and then into a culvert going under Silberhorn. Our HOA has been advised that this is also a part of the city drainage system. I can't believe that in this day and age my taxes are paying for a ditch that overflows with serious storms.

If the development occurs, all of the current flooding will move further upstream right into our homes. There is nothing in the North Pointe development plan that addresses this. They are hooking into existing drain lines.

Currently, there are only about a dozen homes in our neighborhood. All of us have complained to the city about water pressure at one time or another. You literally can't take a shower without making sure the water is off in other parts of your house, especially in the summer. The water department has advised us that this is still considered adequate. The new development will add 30 more homes to the existing water lines. At one time, the North Pointe developers said they would put in a booster pump. This is no longer in the development plan and no one has said what will happen to existing pressure with further development.

Our streets are currently privately owned. Will the city take them over with the new project?

7th Avenue is a current city street, but for the most part city workers stop maintenance at Silberhorn. This is another reason why our current neighborhood streets should become city. Then there would be no confusion and we wouldn't have to continually ask the city to provide maintenance services when required.

I know our neighborhood would appreciate any help you can provide. The storm water drainage and water pressure issues are critical and should be addressed whether there's development or not.

Thanks,
John Akridge

Sent from my iPhone

Exhibit 8.o
Attachment

Tim Woolett

From: Sue Harrison <lolasue1955@outlook.com>
Sent: Monday, January 17, 2022 6:05 PM
To: Tim Woolett
Subject: Water drainage

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

It is a big concern around here about the water drainage. It is very upsetting that the city does not want to address the water issue here. In our opinion putting more homes

above would only make this situation worse. If the roads on Rolling Hills Way, Jara Way, and Comfort Way are taken over by the city, they need to be maintained, like plowed if needed in the Winter. We would like all trucks to come through 7th Street side, NOT up Rolling Hills Way.

Thank you,
Rick and Sue Harrison
Get Outlook for Android

Exhibit 8.p
Attachment

Tim Woolett

From: Steve Graham <sngraham98070@gmail.com>
Sent: Tuesday, January 18, 2022 8:46 AM
To: Tim Woolett
Cc: Ben Fisher; David Meissner
Subject: Phase B subdivision comments
Attachments: Phase B Comment template.docx

EXTERNAL SENDER: This email originated outside the organization. Do not click links or open attachments unless you verify the sender and know the content is safe.

Tim,

I am the current vice-president of the Home Owner's Association for the Home Estates located on Comfort Way, Jara Way and Rolling Hills Way. I would like to support the concerns expressed in Ben and David's letter (copy attached). There will be big changes to our subdivision in the near future as these developments proceed and all of us are concerned that this development be carried out with the minimum disruption. Thanks for your help with these issues.

I have a couple of other concerns that I want to take up with whoever deals with them. Perhaps you can guide me to the right office?

On Seventh Avenue just north of Safeway there is a set of traffic signs and an incomplete repair that has been there without any action at least since I moved here about seven months ago. I am a regular bike rider, and the signs force me out into traffic every time I pass them. The road repair is poorly done and seems to be partially complete. Is anyone working on that? Is there a date that we can expect this repair to be completed?

I would also like to see an off-road bicycle and pedestrian path down Seventh Avenue between Silberhorn Way and the 101 bridge. I ride that stretch regularly and it is the most hazardous part of the ride to downtown. I am right out in traffic and there is no shoulder and the traffic is pretty fast. The land on the east side of Seventh is undeveloped and it should be possible to put in something to provide better accomodation for pedestrians and bicycles. A lot of people walk and ride that stretch and there will be many more as all the development efforts in our area progress.

Thanks for any help or information that you can provide me.

Steve Graham

Exhibit 8.q
Attachment

1. Public/private streets: the neighborhood supports having the City take ownership of Comfort Way, Jara Way, and Rolling Hills Way. Our streets are in very good shape, and it should not be a burden for the City to maintain the streets for Phase A as well as Phase B. It is in the best interest of the City to own these streets rather than create “road islands” where a private street is the only connection to a public one.

2. Water pressure: the water pressure in the neighborhood is not ideal at the moment, and there is concern in the neighborhood about the effect of the new development. We understand that North Pointe has plans to improve the water pressure for the whole area, but we haven’t seen the specific plans. Please ensure that the water pressure issue is addressed satisfactorily as a condition of this permit.

3. Construction hours: North Pointe agreed verbally to set the construction hours as 7am to 7pm Monday through Friday, and 8am to 4pm Saturday, with no work on Sundays or holidays. We would like to make sure this is clearly documented.

4. Completion of streets: North Pointe should complete the streets before any homes can be sold and occupied, for the safety of the neighborhood and in the event that North Point decides to halt construction of subsequent phases of Part B.

5. Road condition: we would like to make sure that any damage to our roads is noted, and that North Pointe will commit to maintaining the roads in as good or better condition as prior to construction. While they plan to use Comfort Way for all access, it is likely that both Jara Way and Rolling Hills Way will also be used by construction vehicles, and those roads should be maintained as well.

6. Water runoff to Jara Way: our homes on Jara Way are below the slope of the land for Phase B, and we are concerned about water runoff into our back yards and further north. We have not seen any specific plans on how this will be managed.

7. The City needs to determine ownership and responsibility of the 24” storm catchment system on the SE property line. If it is indeed the responsibility of the Home Association to maintain that line the developer should be required to inspect and repair the line to City standards and provide as built maps as well as an O&M manual to the HOA. It should not be Home HOA’s responsibility to assume maintenance until/unless it is in optimal condition.

8. I did not see a cluster for mailboxes in the plans on the City website. Please advise us of where the mailboxes are to be installed. If the plan is to install them at or near the current mailbox location the developer should be responsible for providing a dark sky light at the location to provide safety lighting for people accessing the mailbox kiosks after dark.

Exhibit 8.r
Attachment

Comments for January 18 Planning Commission and City Council

My name Is Ben Fisher. I live at 10 Jara Way and am President of Home Property Owners Association. I'd like to speak for a few minutes about the proposed Home Division B Subdivision. I want you to know that I am in favor of North Pointe developing the area, but I would like the City and the applicant to work out some details.

- I have not seen a completed engineering plan to address storm drainage. We purchased our home in March 2020. After we moved in July 2020, the driest part of the year, we found that water was in the crawlspace and the beginning of mold was present. We spent over $35,000 to mitigate the issue, including a new dry well, installing drain lines around the perimeter of the foundation, sealing the crawlspace, adding a sump pump, and putting in a dehydrator to keep the crawlspace dry. We believe, and in consultation with City staff, that most of our water issue is a result of stormwater infiltration. I and most of our neighbors in our development as well as Cherry Blossom Estates can tell you about issues they have or have seen during even minor rain events. I know of at least two houses on Rolling Hills Way and three on Petal Lane that have sump pumps. The pumps on Petal lane run nearly 24 hours a day during the wet season. Until just a few days ago a manhole on Silberhorn near Petal Lane was overflowing, running water into a ditch. My understanding is that there is a much larger drain pipe from south of Silberhorn running into an 8 inch drain, which is causing it to overflow. There is also standing water on the vacant lots between Comfort Way and Malandra. Our homes on Jara

Way are below the slope of the land for Phase B, and we are concerned about water runoff into our back yards and further north. In the proposed plans it appears that something like 49% of the land in the new subdivision will be have impermeable surfaces. We have not seen any specific plans on how this will be managed. I'm told that the City has a goal that stormwater will be dealt with on site; please make sure that the City has approved North Pointe's stormwater plan including engineering designs before moving forward.

- There is a 24-inch catchment system on the southeast side of Homes Property Owners Association that is mentioned as a way to capture stormwater runoff. There seems to be some discrepancy as to who owns the system, and what it is for. After discussions with City staff we were told that we were not responsible for the system and were allowed to take it off our annual stormwater maintenance list. We do not want to be responsible for something we don't own, particularly if it is draining storm water from the Legacy Ridge area uphill from us. The City needs to determine ownership and purpose of this system. If it becomes our responsibility the applicant should be required to have it inspected and repaired if necessary and provide an O&M manual.
- The applicant stated in an October 2019 public meeting that water pressure issues will be addressed by adding a pressure pump to their project. I am now told that a 10-inch main will instead be used. Please verify that this will increase water pressure and that the lines will be looped for all residents of Homes HOA as well as Cherry Blossom Estates so that we have good, consistent water pressure.
- The applicant proposes that the City make the streets they build public. We favor that, but ask that as part of the approval the City

adopt the streets in the project as well as Comfort Way, Jara Way, and Rolling Hills Way. This will eliminate the creation of “road islands” and bring the streets under City ownership, which seems logical. If the City does not wish to adopt the streets then any plans for street lighting and trees should be removed. It should not be the burden of homeowners to pay for items the City desires but will not accept responsibility for.

- All of the streets should be completed before the applicant is allowed to sell home sites. In the January 4 meeting the applicant stated a desire to build a “hammerhead” between phases instead of completing the streets. This can cause an ingress/egress issue in case of emergency, and does not address the possibility that the applicant will not complete future phases.
- We would like to make sure that any damage to our roads from construction is noted, and that North Pointe will commit to maintaining the roads in as good or better condition as prior to construction. While they plan to use Comfort Way for all access, it is likely that both Jara Way and Rolling Hills Way will also be used by construction vehicles, and those roads should be maintained as well.

Given that there has not been a Planning Commission meeting in two years regarding this development and that the ownership of several properties has changed hands over time, and allowing for new water issues that have been identified, I think the best course is for the City to delay approval pending review of the applicants plans for engineering and to allow testimony in a public meeting. Futher, the

applicant should be required to hold another stakeholder’s meeting so that our concerns can be addressed. Thank you for your time.

Exhibit 8.s
Attachment

Cherry Blossom Estates
P.O. Box 1191
Sequim, WA 98382

President: David Kuttel
Vice President: Brooke Hoskett
Treasurer: David Talley
Secretary: Deborah McKean
At Large: Vera Fellz

February 6, 2022

Mr. Barry Berezowsky,
Director, Department of Community Development
City of Sequim
152 W. Cedar Street,
Sequim, Washington 98382

Sent via email: bberezowsky@sequimwa.gov

Re: Home Subdivision Phase B – Sequim, WA

Dear Mr. Berezowsky,

I am the president of the Cherry Blossom Estates (CBE) HOA and wish to comment on the proposed Home Estates Division B Subdivision. As a whole, CBE Home Owners Association would support the North Pointe development; however, we have concerns about certain aspects of the planned construction that may further degrade the existing flooding in our HOA from upgradient sources.

Permit me to provide some background information regarding our district. We currently have a number of homes that suffer significant crawlspace flooding, which requires continuous operation of sump pumps to evacuate collected water. These homes are located on the north side of our development. The phase 1 utility plan for CBE Job Number 0442 sheet five of nine dated 9/8/04 notes that all street storm water drains into WSDOT Type 1 catch basins that supply infiltration trenches that are located on the central Greenbelt under the existing asphalt sidewalk. This, in itself, concentrates storm drain runoff through a number of infiltration trenches mainly located on the north ends of Petal Lane. Ground slope direction is to the north, therefore, subsurface water flows to the north side of CBE. This area is also home to a number of surface streams that were "diverted" by the district. Unfortunately, that water, subsurface and surface, follows the existing terrain and continues to drain through our HOA.

It is our understanding, that the City of Sequim Planning Commission is set to approve engineering plans related to storm water drainage from the Home Estates - Phase B Subdivision that includes a 24-inch culvert which drains into a ditch owned and maintained by CBE. The end of this ditch crosses under the sidewalk at East Silberhorn Road through an 8-inch culvert, which is currently inadequate to sufficiently remove the runoff from the Home Estates and Legacy Ridge developments. Prior to any approval of the up-gradient Home Estates Phase B Subdivision, it is strongly requested that the resizing of that 8-inch culvert is addressed. Additionally, since the Home Estates Subdivision Phase B plan implies their use of the CBE drainage ditch on the east side of our property, upgrades to that ditch will be required that should be added to the construction Phase B plans.

On review of the **Exhibit Log** a number of interesting things have been noted in the Geotechnical Report Home Subdivision-Phase B for Green Crow Investments Company LLC prepared by Zenovic & Associates Inc. dated 6/1/2021 and was entered as Exhibit 12.

> *Under section 2 Site Investigation, 2.1 Site Description, last paragraph "there were no defined drainage channels observed on the site".*
>
> This indicates that rainwater runoff and flow soaks into the grade and is disseminated across the site. Introduction of infiltration trenches in one localized area for the first phase constitutes a concentration of subsurface flow that will adversely impact the CBE current flooding situation.
>
> *Under section 2 Site Investigation, 2.4 Subsurface Exploration, second paragraph "an additional four test pits were excavated on February 7, 2020 directly following a major storm event to observe groundwater conditions. At the time the groundwater was encountered at approximately 48 inches below ground surface and some ponding was observed at the south end of the site due to off-site runoff. This indicates the current sites in its current condition cannot support runoff from the exterior of the site".*

It appears that of the six test pits dug in the northeast section, only one of these test pits was water depth measured. Test pits water level logs indicate increasing in depth on the south of the site. This is an indication of a rising water table as you move in a northern direction.

It is our contention that there is a restriction of subsurface flow caused by the construction of East Silberhorn Road due to the construction code. If this road was built to code and compacted as per the Washington State DOT it will act as a dam, particularly if the subsurface water depth is 48 inches or less. The drainage situation at E. Silberhorn Rd. and 7th Avenue is currently on the recommended repair list of the City of Sequim due to the repeated flooding that impacts CBE and surrounding properties. The increase of directed flow of subsurface water due to the Home Estates Subdivision Phase B will aggravate the current flooding issue at this corner particularly during high runoff or rainfall, which directly affects the drainage of CBE.

The **Exhibit Log** has a memorandum written December 30, 2021 and listed as Exhibit 7.d

> That a number of conditions must be satisfactory addressed in the site construction permit application process before public works can recommend approval of the site construction permit application:
>
> 3. *Provide a Groundwater Mounding Analysis. Approximately two thirds of the proposed lots are within the finer material (McKenna and Mukileo) near test pits #5, 6, and 7 which did show some evidence of perching groundwater (Reference Geotechnical Report). A groundwater mounding analysis shall be conducted in accordance with 2014 SWMMWW Volume III.3.3.8 Section 10.*
>
> 11. *O & M for existing 24 inch Stormwater Catchment System on southeast property line. Include further discussion of the existing storm water drainage system in place within the boundary of the proposed development. Who owns and maintains both during*

and post development these facilities referenced in this comment are currently shown within the proposed boundary of Drawing C003 along the southwestern property line? Legacy Ridge proposes to connect to this system for stormwater outfall. Has an additional flow been added to the system since being taken into account? The applicant stated the system is maintained by the HOA per AFN#2018-1370366, however this document does not directly address this existing system, nor does the Plat of Homes Phase A (V 15 pg41) show an easement for the storm water line.

Continuing through the **Exhibit Log**,

"Exhibit 7.c. The State Historic Preservation Officer letter dated November 20, 2019 indicates the area has been determined to be a high risk of containing archaeological resources according to the DAHP predictive model, and similarities in Sequim have yield significant archaeological finds. Therefore, we recommend a professional archaeological survey of the project area to be completed prior to the ground disturbing activities. We also recommend consultation with the concerned tribes cultural committees and the staff regarding cultural resource issues."

If this professional archaeological survey has been completed, please provide said results from the survey. It should be noted that this issue was mentioned in the Mitigated Determination of Nonsignificance, presented as Exhibit 6 dated and signed 11/8/2019 but the State Historic Preservation Officer's letter was dated 11/20/2019. It would appear that the decision to utilize the Inadvertent Archaeological and Historic Resources Discovery Plan for Sequim, Washington was decided by the city prior to the receiving of the letter from the State Historical Preservation Officer and just after receiving the letter from the Jamestown S'Klallam Tribe suggesting the same thing.

These are a few issues that were noted within this exhibit document and should be addressed prior to any approval given for construction initiation.

Our other concern would be that the current inspection staffing is low and the experience level is also low, referring back to Storm and Surface Water Master Plan, Prepared for City of Sequim by Herrera Environmental Consultants, Inc. dated February 25, 2016. This site is going to require much attention to ensure that all the right things are completed at the right times. If only one thing is not completed as per code and/or recommendation, the housing downstream of this new development is going to suffer. Please remember these people are taxpayers; we expect the city to do the right thing. Thank you for your time and your attention.

Sincerely,

David L. Kittel
Cherry Blossom Estates
President

c.c. Tim Woolett, Senior Planner, City of Sequim, WA
Cherry Blossom Estates File
Ben Fisher, Home Estates HOA President

Exhibit 9

GREEN CROW
PROPERTIES

727 East 8th Street • P.O. Box 2439 • Port Angeles, WA 98362
Cell: (360) 775-5450 (Kurt Hansen) • Cell: (360) 477-8306 (Bruce Emery)
Cell: (360) 460-2500 (Dennis Yakovich) • Fax: (360) 417-3674

RECEIVED
NOV 01 2019
City of Sequim, DCD/PW

October 31, 2019

City of Sequim, DCD
Attn. Tim Woolett, Senior Planner
152 W. Cedar Street
Sequim, WA 98382

RE: Home Phase B, Public Meeting and documentation per SMC 20.01.100(H)

Dear Mr. Woolett,

Green Crow conducted a public meeting in accordance with Section 20.01.100(H), SMC, on October 29, 2019 at the City of Sequim Council Chambers, regarding the proposed Home Subdivision, Phase B. Notice of the meeting was provided on October 8, 2019 per City Code. Although only eight members of the public attended, the discussion was beneficial in understanding concerns of area residents and in being able to address most of the concerns raised at the meeting.

Attached, please find an affidavit of notice of the meeting, as sent on October 8, 2019. Also, please find the Affidavit of Summary of Meeting, which was sent to all attendees on October 31, 2019 in accordance with Section 20.01.100(H)(5), SMC. Lastly, please find attached a copy of the Agenda for the meeting, which included the disclaimer language required under Section 20.01.100(H)(3), SMC.

Thank you for your consideration of this matter. If you have any questions regarding this information, please contact me at 360-417-3669 or by email at bruce@greencrow.com.

Sincerely,

Bruce W. Emery

Bruce Emery
Green Crow Investments Co., LLC

AFFIDAVIT OF MAILING

STATE OF WASHINGTON)
) ss.
COUNTY OF CLALLAM)

I, *Bruce Emery*, being first duly sworn, upon my oath depose and say:

That I, a citizen of the United States and a resident of said Clallam County, over the age of twenty-one years and in no way disqualified therein, on the *8th* day of *October, 2019,* placed in the United States mail a notice of *Neighborhood Meeting for Home Phase B, Preliminary Subdivision, to be held on Tuesday, October 29, 2019, at 6:00 PM, at the City Council Chambers for City of Sequim, 152 W. Cedar Street, Sequim.* A true copy of the notice, attachments and a list of recipients are attached.

Bruce W. Emery
(Signature)

10/8/2019
(Date)

GREEN CROW
PROPERTIES

727 East 8th Street • P.O. Box 2439 • Port Angeles, WA 98362
Cell: (360) 775-5450 (Kurt Hansen) • Cell: (360) 477-8306 (Bruce Emery)
Cell: (360) 460-2500 (Dennis Yakovich) • Fax: (360) 417-3674

October 8, 2019

Regarding: Neighborhood Meeting for Home Phase B, Preliminary Subdivision

Dear Property Owner,

This letter is to provide notice that an informational Neighborhood Meeting has been scheduled for **Tuesday, October 29, 2019 at 6:00 PM to 7:30 PM in the Sequim City Hall Council Chambers**, located at 152 W. Cedar Street in Sequim. The purpose of the meeting is to provide information and opportunity for the public to ask questions regarding the proposed 33-lot Phase B of the Home Subdivision (Application Number SUB 19-001). A brochure has been included with this correspondence providing information on the proposal.

You are invited to attend this meeting to learn about the project and ask questions of the applicant. We look forward to seeing you there.

Sincerely,

Bruce W. Emery

Bruce Emery
Green Crow investments Co., LLC

CITY OF SEQUIM

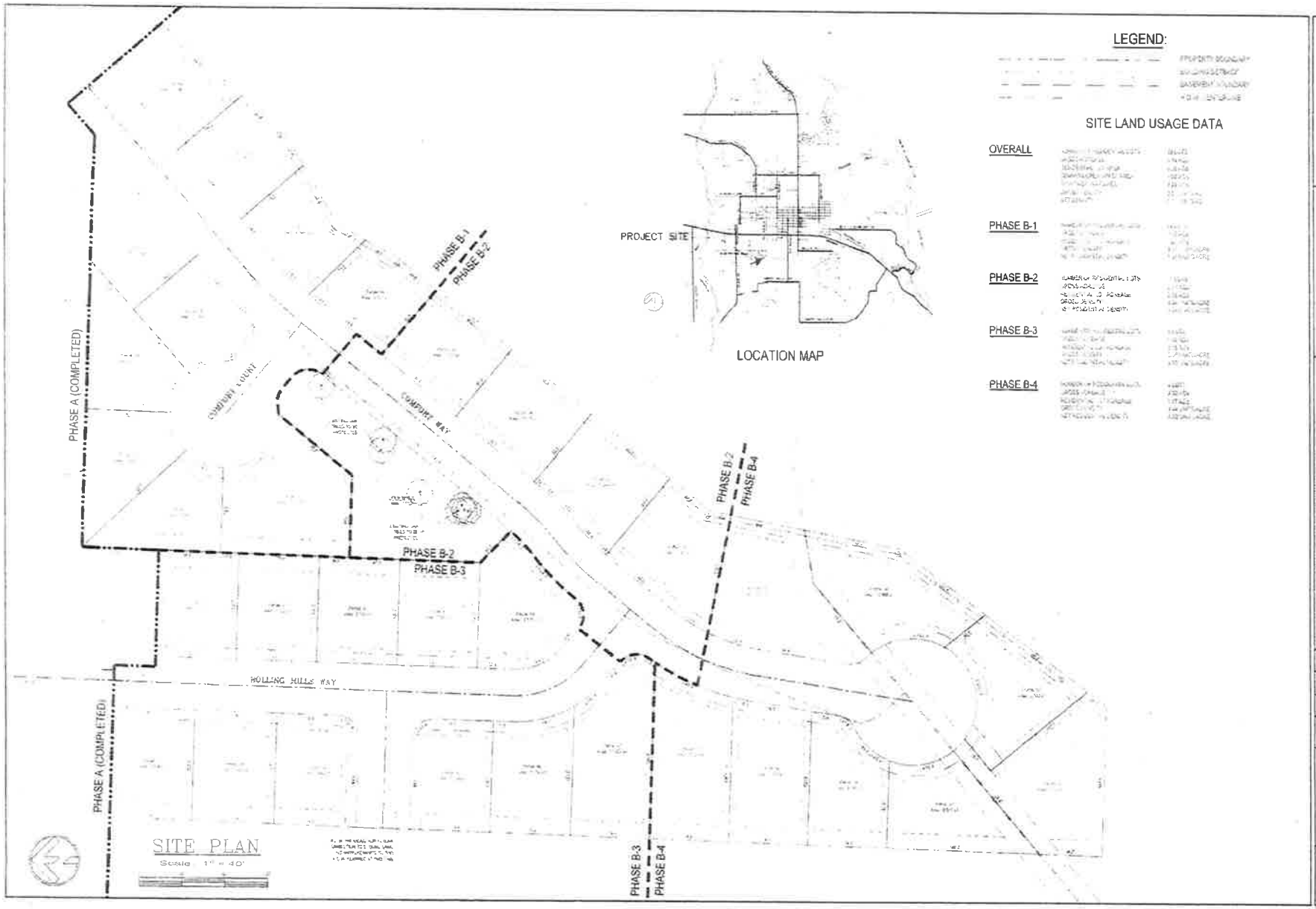
152 W. Cedar Street, Sequim, WA 98382
PH (360) 683-4908 FAX (360) 681-0552

CITY OF SEQUIM
NOTICE OF APPLICATION, PUBLIC MEETING AND PUBLIC HEARING
AND INTENTION TO UTILIZE THE OPTIONAL DNS PROCESS
AND ISSUE A MITIGATED DETERMINATION OF NON-SIGNIFICANCE

PROJECT NAME: Home - Phase B Subdivision.
FILE NO: SUB 19-001; Major Preliminary Subdivision with SEPA.
LOCATION: The 9.14-acre subject property is currently configured as a single parcel situated within a portion of Section 30, Township 30 N. Range 3 W., W.M. Clallam County, Washington, located south of Comfort Way and Rolling Hills Way, and east of E. Quail Lane and Eastgate Place, Sequim, Washington; and identified as Clallam County Assessor's Parcel No. 033030-590000.
PUBLIC COMMENT PERIOD: October 6, 2019 – October 26, 2019.
PROPONENT: Green Crow Investments Company, LLC, P.O. Box 2439, Port Angeles, WA 98362.
PROJECT LEAD: Bruce Emery, Green Crow Investments Company, LLC, P.O. Box 2439, Port Angeles, WA 98362.
PUBLIC MEETING: Sequim Civic Center, 152 W. Cedar St. November 19, 2019 at 6:00 PM.
PUBLIC HEARING: Sequim Civic Center, 152 W. Cedar St. December 9, 2019 at 6:00 PM.
PROJECT DESCRIPTION: A proposed major preliminary subdivision application to develop 33 single family residential lots on approximately 9.14 acres of property currently zoned "Single Family Residence" (R 4-8). The project would be developed in four phases. Phase B-1: 10 lots, Phase B-2: 11 lots, Phase B-3: 4 lots, and Phase B-4: 8 lots.
CONSISTENCY W/APPLICABLE CITY OF SEQUIM PLANS & REGULATIONS: The proposal will be reviewed for compliance with all applicable codes and standards, including the Comprehensive Plan & Sequim Municipal Code.
COMMENTS: Persons wishing to comment on the project should submit written comments within twenty (20) days of the date of this notice, by **4:00 P.M. on Monday, October 28, 2019** (October 26th falls on a Saturday) to the City of Sequim Department of Community Development (DCD), 152 West Cedar Street, Sequim, WA. **The public, tribes and agency staff are encouraged to comment on this application as this may be your only opportunity to comment on this project.** However, public comments will be accepted up to and any time prior to the closing of the public hearing, but will not be included in the staff report. Public comments should be as specific as possible and submitted to the City as early in the review of the application as possible. Any person may comment on the application, receive notice of and participate in any hearings, and request a copy of the decision. Public comments may be mailed, emailed, personally delivered or faxed to the City: Any person has the right to comment on the application, receive notice of and participate in any hearings, request a copy of the decision once made, and may appeal the decision.
PERMITS & STUDIES:

- Major Preliminary Subdivision Approval;
- State Environmental Policy Act (SEPA) Environmental checklist;
- Geotechnical Report, Home Subdivision-Phase B; prepared by Zenovic & Associates, Inc., August 5, 2019.
- Preliminary Stormwater Plan for Hoe Subdivision-Phase B; prepared by Zenovic & Associates, Inc., August 7, 2019.
- Home Subdivision Phase B Traffic Impact Analysis; prepared by Jake Traffic Engineering, Inc., October 4, 2018.

LEAD AGENCY: The City of Sequim assumes lead agency status for this project (SUB 19-001).
SEPA THRESHOLD DETERMINATION: The SEPA Responsible Official anticipates issuing a Threshold Determination following the project's comment period ends on October 26, 2019. Based on the checklist submitted and associated environmental documents, listed above, and incorporated by reference (WAC 197-11-600(4)(b), the adopted City Comprehensive Plan and development regulations it is anticipated that a threshold determination resulting in a Mitigated Determination of Non-Significance (MDNS) will be issued for this project per WAC 197-11-158. An environmental impact statement (EIS) is not required under RCW 43.21(C).030(2)(c). A copy of the subsequent threshold determination may be obtained upon request and will be available on the City's webpage (www.ci.sequim.wa.us).
DATE OF PERMIT APPLICATION: September 23, 2019.
DATE OF DETERMINATION OF COMPLETENESS: September 25, 2019.
DATE OF NOTICE OF APPLICATION: October 6, 2019.
PUBLIC COMMENT DUE DATE: October 26, 2019 (October 26th falls on Saturday-comments accepted until the close of business the following Monday, October 28th).
SEPA RESPONSIBLE OFFICIAL: Barry Berezowsky, Department of Community Development Director. If you have any questions or concerns regarding this matter, please contact the City of Sequim DCD, at 152 W. Cedar St., Sequim, WA 98382 or at (360) 681-3435 email at bberezowsky@sequimwa.gov.


PHASE A (COMPLETED)
COMFORT COURT
PHASE B-1
PHASE B-2
COMFORT WAY
PHASE B-2
PHASE B-4
PHASE B-2
PHASE B-3
ROLLING HILLS WAY
PHASE A (COMPLETED)
PHASE B-3
PHASE B-4
SITE PLAN
Scale: 1" = 40'
PROJECT SITE
LOCATION MAP
LEGEND:
SITE LAND USAGE DATA
OVERALL
PHASE B-1
PHASE B-2
PHASE B-3
PHASE B-4
PRELIMINARY LOT LAYOUT
GREEN CROWN DEVELOPMENTS CO. LLC
P.O. BOX 2938
PORT ANGELES WA 98362
SCALE
1" = 40'
JOB NO.
16032
DATE
August 7, 2019
SHT
PRE-PLAT
SHEET
C001

Cherry Blossom Est. Assoc.
21 Rolling Hills Way
Sequim, WA 98382

David & Donna Rise
101 Petal Ln.
Sequim, WA 98382

Marla Maclean
3077 Moloki Place
Costa Mesa, CA 92626

William & Melody Miano
121 Petal Ln.
Sequim, WA 98382

Kevin & Shelly Bell
PO Box 1169
Sequim, WA 98382

Jerry & Patricia Townsend
141 Petal Ln.
Sequim, WA 98382

Hubertina Reininger
151 Petal Ln.
Sequim, WA 98382

Normon Drewett
161 Petal Ln.
Sequim, WA 98382

H30 LLC
Attn. Greg Hudson
1271 Taylor Cutoff Rd.
Sequim, WA 98382

Home Property Association
PO Box 3432
Sequim, WA 98382

Maureen Boyd
151 Valley View Dr.
Sequim, WA 98382

Ronald & Cathy Grant
10 Jara Way
Sequim, WA 98382

John Crawford
30 Jara Way
Sequim, WA 98382

Mary Flagg
40 Jara Way
Sequim, WA 98382

James & Susan Haus
60 Jara Way
Sequim, WA 98382

John & Yumiko Akridge
70 Jara Way
Sequim, WA 98382

Bonnie Barbich
111 Rolling Hills Way
Sequim, WA 98382-3678

Joseph & Yvonne Schipani
120 Rolling Hills Way
Sequim, WA 98382

Matthew & Stephanie Nash
PO Box 881
Sequim, WA 98382

Rick & Susan Harrison
140 Rolling Hills Way
Sequim, WA 98382

Judith Gauderman
91 Jara Way
Sequim, WA 98382

Richard & Poon Degroat
PO Box 1893
Sequim, WA 98382

Susy So & Brian Pickering
71 Jara Way
Sequim, WA 98382

David Meissner & Lorra Cornetet
61 Jara Way
Sequim, WA 98382

Patrick & Mary Helen Benapfl
51 Jara Way
Sequim, WA 98382

Edward & Edith Anders
41 Jara Way
Sequim, WA 98382

Kenneth & Angela Freeman
8543 25th Ave NW
Seattle, WA 98117

Kristina Hinkle
34 E Pheasant Ln.
Sequim, WA 98382-8251

Tom & Nancy Moore
25504 Cumberland Way
Black Diamond, WA 98010

Lex & Karla Morgan
TTES Morgan Family Living Tr
61 East Quail Lane
Sequim, WA 98382

Boyd Family Limited Partnership
382 N Nightfall Ave.
Tucson, AZ 85748

Timothy Finch
84 E Quail Ln.
Sequim, WA 98382

Philip & Joann Mortenson
102 E Quail Ln.
Sequim, WA 98382

Thomas & Ann Mulhern
61 Eastgate Place
Sequim, WA 98382

Kevin & Vicki McCormack
81 Eastgate Place
Sequim, WA 98382-7138

Dian Woodle
PO Box 478
Sequim, WA 98382

Janet Rogatz
80 Eastgate Place
Sequim, WA 98382

Jack & Nancy Metcalfe
60 Eastgate Place
Sequim, WA 98382

Hansen Family Trust
121 Rolling Hills Way
Sequim, WA 98382

AFFIDAVIT OF SUMMARY OF MEETING

STATE OF WASHINGTON)
) ss.
COUNTY OF CLALLAM)

I, *Bruce Emery*, being first duly sworn, upon my oath depose and say:

That I, a citizen of the United States and a resident of said Clallam County, over the age of twenty-one years and in no way disqualified therein, on the *31st* day of *October, 2019,* provided via electronic mail service a *Summary of Public Meeting Presentation, Concerns, Questions and Outcomes* (Summary Report) to all persons who attended the *Public Meeting for Home Phase B, Preliminary Subdivision,* that was held on Tuesday, October 29, 2019, at 6:00 PM, at the City Council Chambers for City of Sequim, 152 W. Cedar Street, Sequim. A true copy of the notice with recipients' email addresses, Summary Report and a list of attendees are attached.

Bruce W. Emery
(Signature)

10/31/2019
(Date)

Bruce Emery

To:	jyschipani@gmail.com; drjimmy914@yahoo.com; marehead@gmail.com; mhbenapl@hotmail.com; timfinch@olympus.net; David Meissner; lmorgan350 @gmail.com; kmac1969@hotmail.com
Subject:	Summary of Public Meeting, Home Phase B
Attachments:	Meeting Summary 102919.pdf

Hello Community Residents,

Attached is a summary of the meeting that was held Tuesday night at the Sequim City Council Chambers regarding the proposed Home Subdivision Phase B, by Green Crow Investments Co., LLC. I want to thank all of you who attended the meeting. I appreciate the questions and comments you provided. I attempted to capture all comments and include them in the attached summary; however, I suspect I may have missed one or two.

If you have any questions regarding the attached information, or have any current or future questions on the project, please feel free to contact me at 360-417-3669 or by email at bruce@greencrow.com. We are interested in addressing your concerns to the best of our ability.

Sincerely,

Bruce Emery
Green Crow Investments Co., LLC

Home Subdivision Phase B
Summary of Public Meeting Presentation, Concerns, Questions and Outcomes
Green Crow Investments Co., LLC
October 30, 2019

The following is a brief summary of the Public Meeting that was held on October 29, 2019 at 6:00 PM in the City Council Chambers for the City of Sequim, to review and discuss a 33-lot subdivision proposal by Green Crow Investments Co., LLC.

1. **Meeting and process Summary**. The representative of Green Crow gave a brief summary of the meeting Agenda and the subdivision approval process.
2. **Project Summary**. The representative provided brief details on the project: 9.14 acres, 33 lots, located south of Home Subdivision Phase 1, studies completed to date, all streets will be public, Stormwater will be infiltrated on site.
3. **Specific Concerns**. The representative provided details on concerns that have already been expressed to them by members of the community: Possible impacts to private roads from construction equipment, possible impacts from stormwater, Impacts to the Garry Oak grove that exists on the property, and lack of adequate water pressure serving the immediate vicinity. The representative indicated that, to address these concerns, Green Crow would: limit construction access to the site to Comfort Way, document the current condition of the road, and repair any damage to the road created by construction vehicles; stormwater would be infiltrated via sand-lined trenches to maintain current hydrology and provide treatment before discharge into the ground; the Garry Oak grove would be protected by a designated open space area designed into the Plat, and; Green Crow would be required to address water pressure for the new development, which could involve the installation of a booster pump.
4. **Concerns expressed at the Meeting**. The following concerns were expressed during the discussion portion of the meeting:
    - Concern was expressed by an owner on Quail Run with respect to the proposed right-of-way extending west from Rolling Hills Way between Lots 25 and 45. The representative noted that City Policy required that future access points be planned for, such as the logical extension of Quail Run to the west of the project. However, it was noted that the right-of-way would not be required to be developed as part of the immediate plat, but would exist only if future need and circumstances dictated.
    - It was questioned whether the roadside ditches would be maintained by the City, or if they would become the responsibility of the Homeowners Association (HOA). No clear answer was known, but it was reiterated that the ditches would be part of the City right-of-way, which may give indication of the responsible party.

- Concern was expressed that development on those proposed lots that abut Phase A would create a visual problem with respect to the existing, neighboring lots located on the south side of Jara Way. Specifically, those lots were described as having been cut into the natural grade, resulting in a two to three-foot drop from the Phase B property. The concern is that the new homes might impede the aesthetic quality of the lots along Jara Way by being elevated—resulting in the feeling that they could "peer into their bedroom." The representative acknowledged this issue and indicated it wouldn't be desirable for either parties. The representative did indicate that Green Crow would consider the situation carefully. Options might include: grading the new lots to be compatible with the existing ones, incorporate fences or landscaping to achieve privacy without being too prominent.
- It was noted that a 15-foot wide path exists between Lots 31 & 32 of Phase A, presumably to provide for a future pathway between Phases A & B. The proposed design does not include a continuation of this path. It was speculated that the strip could be divided and deeded to the abutting owners. The representative did express a willingness to consider a continuation of the path if so desired by the community.
- It was asked how the new homes in Phase B would be compatible with those that exist in Phase A. The representative indicated the new homes would require Architectural review by the HOA as required in the CC&Rs. The Representative mentioned he thought the new homes would range from 1,800 SF to 2,400 SF. This statement was in error. Green Crow plans to maintain the same general square feet for buildings within Phase A for new development within Phase B and plans to comply fully with the requirements of the CC&Rs and architectural review.
- It was questioned where mailboxes for the new homes would be located. The representative thought they would be required to cluster the boxes along with the existing boxes on Comfort Way. It was asked whether a pullout for the mail carrier could be incorporated with the new boxes. The representative noted that the Postal Service would likely require a minimum pull-out access for the carrier.

The meeting was adjourned at 7:10 PM.

Respectfully,



Bruce Emery
Green Crow Investments Co., LLC

Home Phase B Public Meeting
Sign-in Sheet

NAME	MAILING ADDRESS	EMAIL ADDRESS
LEX MORGAN	LMORGAN 380 @ gmail.com	61 E Quail Lane Seq
Yvonne Schipani	jyschipani@gmail.com	120 Rolling Hills Way
Sue Haus	60 Jara Way Sequim	drjimmy914@yahoo.com
MARY FLAGG	40 JARA WAY SEQUIM	marehead@gmail.com
Mary Helen + Patrick Benapfl	51 Jara Way Sequim	mhbenapfl@hotmail.com
Tim Finch	84 E. Quail Ln, Seq	timfinch@olympus.net
David Meissner	61 Jara Way Sequim	dmeis99@gmail.com
Kevin McCormack	81 Eastgate Pl,	Krmac1969@Hotmail.com

AGENDA
Public Meeting Regarding Proposed Home Subdivision Phase B by Green Crow Investments Co., LLC
Tuesday, October 29, 2019 at 6:00 PM
City of Sequim Council Chambers
152 West Cedar Street, Sequim

A. Meeting and Process Summary

B. Project Summary

C. Studies Completed to Date

D. Specific Concerns Identified to Date

E. Questions, Comments and Discussion

F. Adjournment

Please Note: The proposed project described in this presentation and meeting is still in its preliminary stage. Changes to the proposal during the preliminary review process and project construction are possible. The final project could include variations from the preliminary design and differ from project particulars discussed during the Public Meeting.

Exhibit 10

CITY OF SEQUIM

152 W. Cedar Street, Sequim, WA 98382
PH (360) 683-4908 FAX (360) 681-0552

CITY OF SEQUIM
NOTICE OF APPLICATION, PUBLIC MEETING AND PUBLIC HEARING
AND INTENTION TO UTILIZE THE OPTIONAL DNS PROCESS
AND ISSUE A MITIGATED DETERMINATION OF NON-SIGNIFICANCE

PROJECT NAME: Home - Phase B Subdivision.

FILE NO: SUB 19-001; Major Preliminary Subdivision with SEPA.

LOCATION: The 9.14-acre subject property is currently configured as a single parcel situated within a portion of Section 30, Township 30 N. Range 3 W., W.M. Clallam County, Washington, located south of Comfort Way and Rolling Hills Way, and east of E. Quail Lane and Eastgate Place, Sequim, Washington; and identified as Clallam County Assessor's Parcel No. 033030-590000.

PUBLIC COMMENT PERIOD: October 6, 2019 – October 26, 2019.

PROPONENT: Green Crow Investments Company, LLC, P.O. Box 2439, Port Angeles, WA 98362.

PROJECT LEAD: Bruce Emery, Green Crow Investments Company, LLC, P.O. Box 2439, Port Angeles, WA 98362.

PUBLIC MEETING: Sequim Civic Center, 152 W. Cedar St. November 19, 2019 at 6:00 PM.

PUBLIC HEARING: Sequim Civic Center, 152 W. Cedar St. December 9, 2019 at 6:00 PM.

PROJECT DESCRIPTION: A proposed major preliminary subdivision application to develop 33 single family residential lots on approximately 9.14 acres of property currently zoned "Single Family Residence" (R 4-8). The project would be developed in four phases. Phase B-1: 10 lots, Phase B-2: 11 lots, Phase B-3: 4 lots, and Phase B-4: 8 lots.

CONSISTENCY W/APPLICABLE CITY OF SEQUIM PLANS & REGULATIONS: The proposal will be reviewed for compliance with all applicable codes and standards, including the Comprehensive Plan & Sequim Municipal Code.

COMMENTS: Persons wishing to comment on the project should submit written comments within twenty (20) days of the date of this notice, by **4:00 P.M. on Monday, October 28, 2019** (October 26th falls on a Saturday) to the City of Sequim Department of Community Development (DCD), 152 West Cedar Street, Sequim, WA. **The public, tribes and agency staff are encouraged to comment on this application as this may be your only opportunity to comment on this project.** However, public comments will be accepted up to and any time prior to the closing of the public hearing, but will not be included in the staff report. Public comments should be as specific as possible and submitted to the City as early in the review of the application as possible. Any person

may comment on the application, receive notice of and participate in any hearings, and request a copy of the decision. Public comments may be mailed, emailed, personally delivered or faxed to the City: Any person has the right to comment on the application, receive notice of and participate in any hearings, request a copy of the decision once made, and may appeal the decision.

PERMITS & STUDIES:

- Major Preliminary Subdivision Approval;
- State Environmental Policy Act (SEPA) Environmental checklist;
- Geotechnical Report, Home Subdivision-Phase B; prepared by Zenovic & Associates, Inc., August 5, 2019.
- Preliminary Stormwater Plan for Hoe Subdivision-Phase B; prepared by Zenovic & Associates, Inc., August 7, 2019.
- Home Subdivision Phase B Traffic Impact Analysis; prepared by Jake Traffic Engineering, Inc., October 4, 2018.

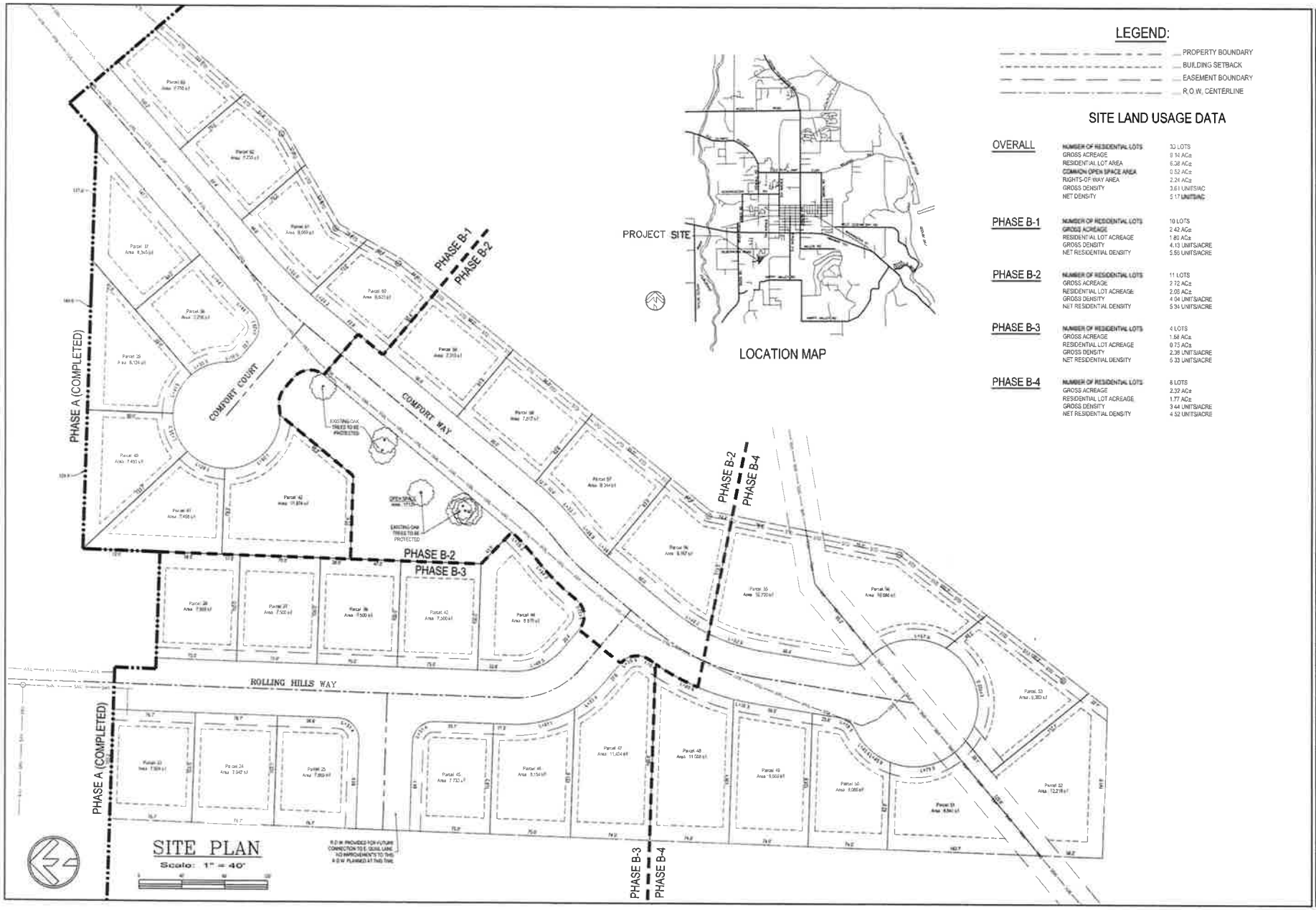
LEAD AGENCY: The City of Sequim assumes lead agency status for this project (SUB 19-001).

SEPA THRESHOLD DETERMINATION: The SEPA Responsible Official anticipates issuing a Threshold Determination following the project's comment period ends on October 26, 2019. Based on the checklist submitted and associated environmental documents, listed above, and incorporated by reference (WAC 197-11-600(4)(b), the adopted City Comprehensive Plan and development regulations it is anticipated that a threshold determination resulting in a Mitigated Determination of Non-Significance (MDNS) will be issued for this project per WAC 197-11-158. An environmental impact statement (EIS) is not required under RCW 43.21(C).030(2)(c). A copy of the subsequent threshold determination may be obtained upon request and will be available on the City's webpage (www.ci.sequim.wa.us).

DATE OF PERMIT APPLICATION: September 23, 2019.
DATE OF DETERMINATION OF COMPLETENESS: September 25, 2019.
DATE OF NOTICE OF APPLICATION: October 6, 2019.
PUBLIC COMMENT DUE DATE: October 26, 2019 (October 26th falls on Saturday-comments accepted until the close of business the following Monday, October 28th).

SEPA RESPONSIBLE OFFICIAL: Barry Berezowsky, Department of Community Development Director. If you have any questions or concerns regarding this matter, please contact the City of Sequim DCD, at 152 W. Cedar St., Sequim, WA 98382 or at (360) 681-3435 email at bberezowsky@sequimwa.gov.

Detailed information and copies of this proposal are available for review at the DCD office and on the City's DCD Current Projects webpage at: http://www.sequimwa.gov/index.aspx?nid=471.



LOCATION MAP

LEGEND:

- PROPERTY BOUNDARY
- BUILDING SETBACK
- EASEMENT BOUNDARY
- R.O.W. CENTERLINE

SITE LAND USAGE DATA

OVERALL	NUMBER OF RESIDENTIAL LOTS	30 LOTS
	GROSS ACREAGE	8.14 AC±
	RESIDENTIAL LOT AREA	6.38 AC±
	COMMON OPEN SPACE AREA	0.52 AC±
	RIGHTS-OF-WAY AREA	2.24 AC±
	GROSS DENSITY	3.61 UNITS/AC
	NET DENSITY	5.17 UNITS/AC
PHASE B-1	NUMBER OF RESIDENTIAL LOTS	10 LOTS
	GROSS ACREAGE	2.42 AC±
	RESIDENTIAL LOT ACREAGE	1.80 AC±
	GROSS DENSITY	4.13 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.59 UNITS/ACRE
PHASE B-2	NUMBER OF RESIDENTIAL LOTS	11 LOTS
	GROSS ACREAGE	2.72 AC±
	RESIDENTIAL LOT ACREAGE	2.08 AC±
	GROSS DENSITY	4.04 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.34 UNITS/ACRE
PHASE B-3	NUMBER OF RESIDENTIAL LOTS	4 LOTS
	GROSS ACREAGE	1.58 AC±
	RESIDENTIAL LOT ACREAGE	0.75 AC±
	GROSS DENSITY	2.38 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.33 UNITS/ACRE
PHASE B-4	NUMBER OF RESIDENTIAL LOTS	5 LOTS
	GROSS ACREAGE	2.32 AC±
	RESIDENTIAL LOT ACREAGE	1.77 AC±
	GROSS DENSITY	3.44 UNITS/ACRE
	NET RESIDENTIAL DENSITY	4.52 UNITS/ACRE

ZENOVIC & ASSOCIATES
INCORPORATED
311 E. 8TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0900
FAX: (360) 417-0901
EMAIL: ZENOVIC@OLYMPUS.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: THREE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY PORT ANGELES WA

PRELIMINARY LOT LAYOUT

CLIENT:
GREEN CROW INVESTMENTS CO. LLC
P.O. BOX 2438
PORT ANGELES, WA 98362

SCALE: 1" = 40'
FILE: 18252-P2
JOB NO: 18252
DATE: August 7, 2019
SCI: PRE-PLAT

8/7/19

SHEET
C001

STATEMENT UNDER PENALTY OF PERJURY
REGARDING MAILING OF PUBLIC NOTICE

Re: Mailing of Public Notice for **Home Subdivision, Phase B; Application No. SUB 19-001**

COMES NOW the undersigned, and hereby certifies (or declares) under penalty of perjury that the below statements are true and correct, to the best of my knowledge and belief.

1. My name is Tim Woolett and I am over the age of 18 and competent to testify herein.
2. I am authorized to represent the City of Sequim on the above-referenced applications.
3. The public notice letters were mailed via United States Postal Service on October 4, 2019, in accordance with the requirements of SMC 20.01.140.

Signed, under penalty of perjury under the laws of the State of Washington, at Sequim, Washington, on 10-4-19.
Date

Tim Woolett
Name

Senior Planner
Title

CITY OF SEQUIM

152 W. Cedar Street, Sequim, WA 98382
PH (360) 683-4908 FAX (360) 681-0552

NOTICE OF PUBLIC MEETING AND PUBLIC HEARING
"Home B" PRELIMINARY MAJOR SUBDIVISION FILE SUB 19-001

NOTICE IS HEREBY GIVEN, that the City of Sequim received the following permit application and determined that it was complete for processing as of September 22, 2021. The Planning Commission Public Meeting is scheduled for January 4, 2022. The City Council Public Hearing is scheduled for January 24, 2022.

DESCRIPTION OF PROPOSAL: A proposed major preliminary subdivision application to develop 33 single family residential lots on approximately 9.14 acres of property currently zoned "Single Family Residence" (R 4-8). The project would be developed in four phases. Phase B-1: 10 lots, Phase B-2: 11 lots, Phase B-3: 4 lots, and Phase B-4: 8 lots.

PROPONENT: North Pointe Construction, LLC (formerly dba Green Crow Investments Company, LLC).

PROJECT LEAD: Bruce Emery, North Pointe Construction, LLC, P.O. Box 2439, Port Angeles, WA 98362.

PROJECT LOCATION: The 9.14-acre subject property is currently configured as a single parcel situated within a portion of Section 30, Township 30 N. Range 3 W., W.M. Clallam County, Washington, located south of Comfort Way and Rolling Hills Way, and east of E. Quail Lane and Eastgate Place, Sequim, Washington; and identified as Clallam County Assessor's Parcel No. 033030-590000.

ENVIRONMENTAL REVIEW: A SEPA threshold Mitigated Determination of Non-Significance (MDNS) was issued on November 8, 2019, under WAC 197-11-355; the Optional DNS Process.

PUBLIC MEETING AND PUBLIC HEARING TIME AND LOCATION: The public meeting and public hearing will both be held will be held virtually due to public health concerns arising from the COVID-19 emergency.

The public can attend the **January 4, 2022, Planning Commission public meeting** online or by telephone.
Website for Audio Streaming: https://zoom.us/j/95108008278
People may also join by calling (253) 215-8782 and using ID# 951 0800 8278

The public can attend the **January 24, 2022, City Council public hearing** online or by telephone.
Website for Audio Streaming: https://zoom.us/j/91235464249
People may also join by calling (253) 215-8782 and using ID# 912 3546 4249.

COMMENTS / APPEALS: Any person has the right to comment on the application, receive notice of and participate in any hearings, request a copy of the decision once made, and may appeal the decision. Public comments will be accepted until the close of the public hearing scheduled for **January 24, 2022**. Comments may be submitted in person via hardcopy at the Civic Center (address noted above), or by U.S. Mail. Comments may also be submitted electronically to twoolett@sequimwa.gov. The application materials, environmental documents, preliminary site plan information, and staff report (once complete) are available for review at the City of Sequim Civic Center, 152 West Cedar Street, Sequim, WA 98382. Many of these documents may also be viewed on the City of Sequim's website at https://www.sequimwa.gov/471/Current-Projects.

STAFF CONTACT: Tim Woolett, Senior Planner (360) 582-2476 twoolett@sequimwa.gov

STATEMENT UNDER PENALTY OF PERJURY
REGARDING MAILING OF PUBLIC NOTICE

Re: Mailing of Public Notice for **Home Subdivision, Phase B; Application No. SUB 19-001**

COMES NOW the undersigned, and hereby certifies (or declares) under penalty of perjury that the below statements are true and correct, to the best of my knowledge and belief.

1. My name is Karen Abbott, and I am over the age of 18 and competent to testify herein.
2. I am authorized to represent the City of Sequim on the above-referenced applications.
3. The public notice letters were submitted for mailing via United States Postal Service on December 29, 2021, in accordance with the requirements of SMC 20.01.140.

Signed, under penalty of perjury under the laws of the State of Washington, at Sequim, Washington, on December 29, 2021.
Date

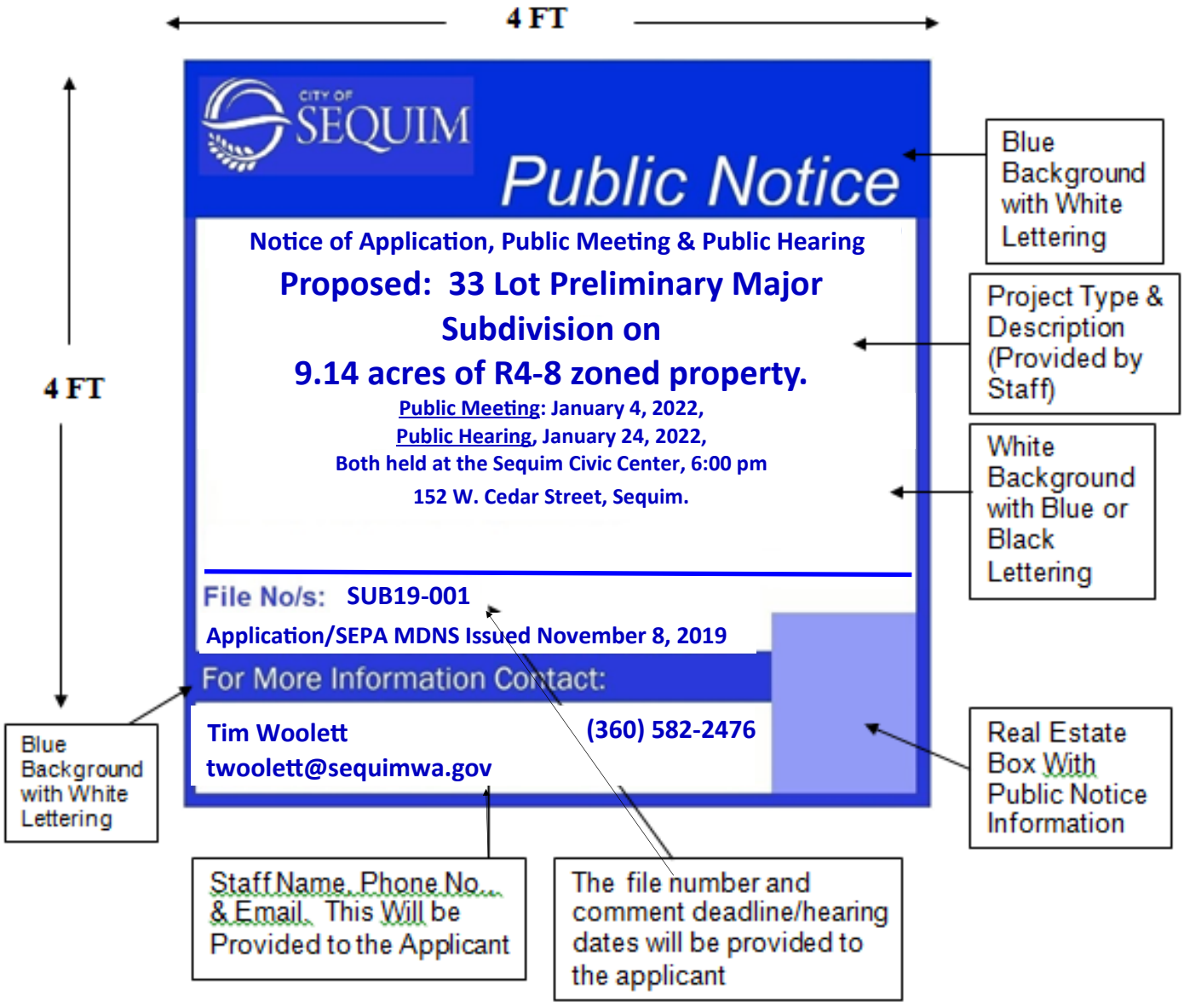
Karen Abbott
Name

Admin Asst II
Title

NOTICE BOARD

The notice board shall be four feet (4') by four feet (4') and shall have a blue background with white lettering for the City logo, "Public Notification", and contact information. Project lettering, stating the land use/project action shall be blue or black on a white background. Lettering size shall be the following (the illustration below is an example. The type of action, dates, and all pertinent information will be supplied by the City):

a. Helvetica or similar standard type face;



AFFIDAVIT OF POSTING PUBLIC NOTICE
PURSUANT TO CITY OF SEQUIM NOTICE REQUIREMENTS
SECTION 20.01.140(C)(1), SEQUIM MUNICIPAL CODE

State of Washington)
)ss.
City of Sequim)

I, Bruce Emery **,being duly sworn of oath say that I have posted**

2 public notice poster(s) on or near the site identified in the following proposed development description:

A proposed 33 lot residential subdivision of 9.14 acres located within the R4-8 zoning district, to be completed in four (4) phases. The subject property is located at the end of Comfort Way and Rolling Hills Way, in a portion of the SW quarter of the NW quarter, and NW quarter of the SW quarter, in Section 30, Township 30 North, Range 3 West, W.M. The property is legally described as Home Phase A&B Parcel B, and is referenced by Assessors Tax parcel Number 033030-590000.

This notice was posted in full compliance with the City of Sequim Notice Requirements Section 20.01.140(C)(1), Sequim Municipal Code on the 4th **day of** October, 2019.

Bruce W. Emery
Signature of person posting notice

Subscribed and sworn to before me on this 7th **day of** October, 2019.

Chris Jackson
Notary Public in and for the State of Washington, residing in Clallam County, Washington.

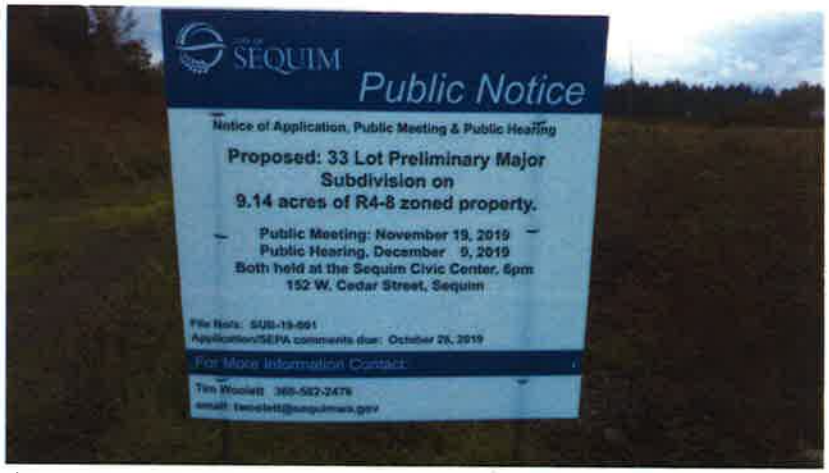
My commission expires April 08, 2021.

CHRIS JACKSON
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
APRIL 08, 2021

Green Crow Investments Co., LLC
Home Phase B Subdivision Application
Photo Evidence of Property Posting on October 4, 2019



Close-up of posting on 7th Street, near Comfort Way.



Close-up of posting on property at end of Comfort Way.



Vicinity of posting on 7th Street, near Comfort Way.



Vicinity of posting on property at end of Comfort Way.

Exhibit 11

ZENOVIC & ASSOCIATES INCORPORATED

CIVIL ENGINEERING

301 East 6th Street, Suite 1
Port Angeles, Washington 98362
(360) 417-0501
Fax (360) 417-0514
E-mail: zenovic@olympus.net

To: City of Sequim

From: Seth Rodman, P.E.

Date: June 1, 2021

Re: Home Subdivision – Phase B – Preliminary Plat Application

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To whom it may concern,

This letter is in response to the City of Sequim's Review Comments concerning the preliminary plat submittal for Phase B of the Home Subdivision. All the review comments will not be addressed as many are targeted more toward a construction set of documents and not a preliminary set for preliminary plat approval. This letter instead is intended to summarize the changes made to the preliminary plat application documents, and address comments related to the Preliminary Plat Submittal.

In addition to addressing the City comments and concerns, the streets were updated to the recently adopted neighborhood street section. The section is to include 12' travel lanes, curb and gutter both sides and a 5' sidewalk on one side of the street. This is generally consistent with the existing streets in the rest of the Home Subdivision (12' asphalt travel lanes, 1.5' wide flat concrete shoulders, 5 foot sidewalk one side). Per the Traffic Study prepared for this project the proposed development will generate 292 average daily trips at peak build-out.

A revised stormwater control plan, geotechnical report and preliminary project plans have been prepared and will be submitted with this letter. The report was updated to address the revised stormwater mitigation strategy and include updated modeling. Additional test pits were also dug throughout the site directly following a major storm event to investigate possible groundwater level concerns. That information is included in the revised stormwater control plan and geotechnical report.

Responses to Memo Comments – (responses in blue)

Plan Submittal

1. Page 3 of the Preliminary Storm Water Control Plan states the Minimum Requirements:

   a. Min Req #2: has 13 elements, only 6 are listed. Please correct this deficiency.

      - The report is a preliminary stormwater report and is intended to give a general outline of how this minimum requirement (construction stormwater pollution prevention) will be met. As stated in the report, a formal Stormwater Pollution Prevention Plan will be prepared during the construction permitting process and will address all 13 elements.

   b. Min Req #3: 4 BMP's listed, list all BMP's to be utilized in this project

      - The 4 BMP's listed are the Source Control of Pollution BMP's that will be utilized on this project.

Geotechnical

1. Site Considerations:

   a. Per "Chapter 17.52A.010 Geologically Sensitive Area Regulations" for the Mukilteo soil type states in section

   "C. Development within these geologic sensitive areas should be evaluated based on their impacts on the surrounding terrain and geological conditions, not in isolation. Management of the entire system should be considered during the development process. (Ord. 1124 SS 9 (part), 2005)"

   - This code section is not in the City of Sequim Municipal Code and appears to come from the City of Mukilteo Municipal Code and does not apply to this project. The City of Sequim Municipal Code Section 18.80.070.C addresses Geologically Hazardous areas.

      i. The Washington State DNR has classified the area of this development as "Moderate to High Liquefaction Susceptibility".

   - No comment.

      ii. Looking at the Soils Report page 11, it can be generalized that 40% of the site is in soil classification "63-Sequim", and 60% of the site is in soil classification "64-Sequim-McKenna-Mukilteo complex".

   - The soils report referenced is the NRCS soil survey report. The information in those reports is general in nature and is not intended to take the place of more precise mapping by onsite investigations. The onsite test pits completed by this office found the majority of the site to be consistent with the Sequim soil types with the southern portion of the site exhibiting signs that it is on the border of the Sequim and McKenna/Mukilteo soil types.

      iii. High seasonal ground water has been reported in this area with seasonal groundwater overflowing from storm drain catch basins around the area of E Silberhorn Rd and Rolling Hills Way.

   - This office performed additional test pits on February 7th, 2020 directly following a major storm event. Flooding of adjacent properties was observed during the test pit excavation. Groundwater was encountered at approximately 4' below ground surface in the excavated test pits.

      iv. PC000: The Vicinity Map shows the slope to the southeast of the development as a "Landslide Hazard area" and 70% of the site as "Seismic Soil Area". The geotechnical report did not address these site classifications. Please address.

   - As noted above and in the geotechnical report, the soils onsite were found to be primarily the Sequim soils. The southwestern portion of the site did contain some soils consistent with the McKenna/Mukilteo soils which are more susceptible to liquefaction. However, those areas were underlain by Sequim soils which are not susceptible to liquefaction. The geotechnical report has been updated to reflect that information.

   How has the management of the entire system within this geologically sensitive area been evaluated based on its impacts to the surrounding terrain and geological conditions (not in isolation)?

   - As noted above, this requirement is not included in the Sequim Municipal Code and does not apply to this project.

3.7 Offsite Steep Slope

Based on review of site conditions and available historical record, the existing slope located southeast of the site has minimal risk of slope failure. Any failure is likely to be in the form of slow soil creep and no large-scale failures are anticipated. A setback of 15' from the property line adjacent to this slope is recommended. This setback will effectively maintain a minimum setback of 35' from the minimal landslide hazard area (defined as where the existing slope exceeds 40%).

b. Provide a Critical Area Special Study.

- The geotechnical report fulfills the requirement for a Critical Area Special Study.

2. Flooding:

   a. The development to the northeast of the site, "Cherry Blossom", and "Aspen Court" located at the intersection of Rolling Hills Way and E Siberhorn Rd, have been experiencing seasonal flooding. The geotechnical engineer should be made aware of this so that they can consider that occurrence when developing conclusions.

      - See response regarding additional onsite investigations above. The stormwater plan has been revised to address the observed high groundwater onsite.

3. Groundwater:

   a. An understanding of seasonal high groundwater should be included based on available information. If adequate information is not available, winter monitoring should be conducted. Consider nearby historic flooding when preparing this section.

      - See response regarding additional onsite investigations above. The geotechnical report has been updated with the additional information and stormwater system has been revised accordingly.

   b. Page 3, Par 1 of the Preliminary Stormwater Control Plan: "No restrictive layers or groundwater tables were observed in the excavated test pits" contradicts the Geotechnical Report, Section 2.5 which states "Test pits 5 through 7 showed some signs of groundwater or perched water with inclusions of loam or loam clay bands" of the Geotechnical Report. Please address.

      - The stormwater report has been updated with the additional information found during subsequent test pits.

   c. Section 3.6 of the Geotechnical Report states "No impact on the proposed construction from groundwater is anticipated". The geotechnical report does not discuss the depth to seasonal high groundwater. The area of this development has historically been subject to high ground water, and neighboring developments experience spring-like events out of low-lying catch-basins.

      - The geotechnical report has been updated with the additional information found during subsequent test pits.

   d. Approximately 2/3 of the proposed lots are within the finer material (Mckenna & Mukilteo) near test pits #5, 6, and 7 which did show some evidence of perched groundwater (Reference Geotechnical Report). A groundwater mounding analysis shall be conducted in accordance with 2014 SWMWW Volume III.3.3.8 Section 10.

      - Per the geotechnical investigation, the majority of the site contains Sequim soils to the surface. McKenna/Mukilteo soils were found in test pits 5 and 6 but were interspersed with and underlain by the Sequim soils.

      The revised design of the stormwater system includes installation of infiltration trenches on all lots to infiltrate roof runoff and bioretention swales adjacent to the roadway to treat and infiltration runoff from the roadway, driveways, and sidewalk areas. These facilities are

spread throughout the site and are intended to infiltrate stormwater as close to the source as possible (i.e. are designed to not concentrate infiltration to one area). Based on the observed groundwater level during a flooding event a 1' separation from the bottom of the infiltration facilities and the seasonal high groundwater can be achieved. It is the opinion of this office that the completion of a groundwater mounding analysis is not warranted and it is requested that this requirement be reconsidered.

4. Test Pits:

   a. The maximum test pit depth is seven (7) feet. "Test pits 5 through 7 showed some signs of groundwater or perched water with inclusions of loam or loam clay bands" per Section 2.5 of the Geotechnical Report. Test pits 5 through 7 represent about ½ of the site area (per layout on Sheet 1). Locally, this does not appear to be a group A hydrologic soil type. Also, no understanding of depth to seasonal high groundwater is provided, and areas to the north of the site have a history of flooding

      - See comments above regarding soil types and later groundwater findings.

   b. Three of the infiltration trenches are shown to be deeper than 7 feet, as indicated below. Test pit depths should be at a minimum to the depth of the proposed facilities. Re-design or run new test pit analyses.

      - Stormwater system has been redesigned with shallow infiltration facilities (3'below ground surface maximum).

      i. On Page C005, the infiltration trench located in the open space at approximately 4+30 of the Comfort Way Profile, is shown to be 11+ feet below grade.
         - No longer applicable.

      ii. On Page C005, the infiltration trench at approximately 1+50 of the Comfort Way Profile, is shown to be 10+ feet below grade.
         - No longer applicable.

      iii. On Page C005, the infiltration trench is located at approximately 1+20 of the Rolling Hills Way Profile, is shown to be 9+ feet below grade.
         - No longer applicable.

   c. Resubmit infiltration rate analysis in accordance with the SWMMWW, Volume 3, Chapter 3.3. Explorations shall extend at least to the minimum depths (below future facilities) required by the Manual.

      - Stormwater system has been redesigned.

Building Envelopes:

1. Section 3.7 of the Geotechnical report states "A setback of 20' from the property line adjacent to this slope is recommended. This setback will effectively maintain a setback of 30' from the toe of slope". Provide setback information and measurements at the affected lots showing the distance from the toe of slope to the property line.

   - Approximate edge of slight landslide hazard area added to plans (defined as slopes exceeding 40%). The geotechnical report has been revised with updated slope and setback information.

2. Show a "No Build Zone" in the area between the toe of slope to the Property Lines.

   - Standard 15' building setback shown as this is deemed as and adequate setback from the slope.

3. Water Main Line (WML) has an easement of 15' on either side of the line. Property lines shall not be placed in this easement.

   - Although the Owner disagrees with the requirement that property lines may not be located within the easement, the property lines have been adjusted to the edges of the easement and the easement area included as open space.

4. Lot 15 shows the driveway within the water main easement, relocate this driveway to outside of the WML easement.

   - Driveway and lot line revised.

5. Show the Highland Irrigation Ditch easement on lots 55, 15, 53 and 52.

   - There is no record of a Highland Irrigation Easement in either the property deed or the plat map (AFN# 2008-1216195). The County mapping included on the vicinity map does show a ditch line, but labels it as an abandoned ditch that is no longer in use. The ditch line is no longer present on this parcel and has been replaced by the piped storm drain system in the 10' wide easement on the eastern edge of the property.

Building Envelopes:

1. The City of Sequim's Development Standards state that all phases of a development or subdivision must be up to city standards as stand-alone developments. This ensures that if only, for example, Phase B-1 or B-3 of the project is completed, the resulting utilities function independently to city standards. Please illustrate each phase will be stand-alone for all utilities and access. Please specifically address storm water drainage and two-points of access.

   - Each phase will be designed to be stand-alone for utilities and access. Two points of access will be provided when number of lots exceed 10 per Sequim Municipal Code Section 17.32.110. Any phase of 10 or fewer lots that does not provide a second point of access will be designed to include adequate turn-around facilities for fire district vehicles. Stormwater facilities will be designed/installed on a per phase basis to mitigate all stormwater from that phase. The details of the stand-alone design for each phase will be demonstrated in the construction permitting documents for each phase.

Stormwater:

1. General:
   a. What is the percentage of total impervious surfacing in the right-of-way areas, and of the total site

      - The total impervious surfacing in the right of way areas is approximately 62,500 square feet or 67% coverage. Total site impervious coverage is approximately 196,100 square feet or 49% coverage.

   b. The project has a contributing area of 9.14 acres and the right-of-way has a contributing area of 2.4 acres. The detailed approach for design of infiltration facilities shall be used for projects greater than 1 acre. See 2014 SWMMWW Volume III. Please address.

- The manual allows the simplified approach for projects where the facilities serve less than 1 acre of contributing area. While the overall area of the site exceeds the noted area, the design of the proposed facilities distributes the stormwater facilities throughout the site and can be characterized as a series of smaller infiltration facilities with relatively small contributing areas. It is requested that the simplified method is allowed.

2. Existing 24" Stormwater Catchment System on SE property line.

   a. Include further discussion of the existing stormwater drainage system in place within the boundary of the proposed development. Who owns and maintains both during and post development? The facilities referenced in this comment are currently shown within the proposed boundary on Drawing C003 along the southwestern property line.

      - The stormwater drainage system is an existing privately maintained system that was installed as part of Phase A of the Home Subdivision. The Home Property Owners Association (AFN# 2018-1370366), of which this subdivision will be a part of, is responsible for the repair and maintenance of that system.

   b. The existing 24" stormwater system is to be serviced via a 10' easement along the southeast property line. This easement is inside or next to the 30-50' slope to the SE and on the northwest is bounded by proposed Parcels 58-63, 53, 15, 55 and Lots 33 and 32. How is access and maintenance proposed for this line and by whom?

      - Access and maintenance will along the 10' easement as accessed from the Open Space (Tract-G) in Phase A at the northeast end of the easement or the 30' wide open space/easement for water transmission pipeline at the south end of the easement. The Home Property Owners Association is responsible for maintenance of that line.

   c. At the Northeast end of the development, a stormdrain easement is shown for the existing 24" storm drain located on a slope. Verify this easement is adequate for servicing the TYP 2 Catch Basins and a 24" storm drain pipe with an illustration.

      - The slope in the northeast corner of the site where the storm drain is located is sloped at less than a 1v:4h. This degree of slope is easily traversed by lawn care and excavation equipment that may be needed for maintenance activities.

   d. The Legacy Homes Subdivision shows sheet flow and dedicated drainage paths over the "Landslide Hazard Area" and onto the proposed development. Specifically, Parcels 58-63, 52, 53, 15, 55 and Lots 32 and 33 are directly impacted by the storm water runoff from this slope. What, if any, actions has this proposal suggested in order to intercept this flow and direct it around the residences and to the existing Stormwater system?

      - Based on onsite observations, any runoff coming down the slope from the proposed Legacy Homes Subdivision is infiltrated quickly upon reaching the bottom of the slope as there were no defined channels or readily observable sheet flow on this parcel near the bottom of the slope. As an added precaution, a swale will be established along the 10' drainage easement to direct runoff to the existing TY 2 catch basins and thus protect the referenced properties.

   e. Installing a culvert that drains the existing off-site slope to the existing catch basins should be considered as a protection measure for down-slope residences.

- See response to point d. above.

3. Highland Irrigation Ditch:

   a. Sheet C003: Show the location of the existing irrigation (Highland Irrigation District) facilities, specifically at parcel 15, 52, 53 and 55.

      - The Highland Irrigation District facilities as shown on the Vicinty Map based on County mapping have been abandoned and are no longer present on this site. The abandoned irrigation ditch to the south of the project discharges to the 24" storm drain main and is conveyed through the site. The vicinity map has been updated to reflect this.

   b. As required by RCW 58.17.310, the Highland Irrigation District will be contacted as part of the application review process to ensure that provision is made for irrigation right-of-way.

      - The Highland Irrigation District will be contacted as part of this review process.

4. Infiltration Trenches/Catch Basins:

   - Stormwater system has been redesigned. These comments no longer applicable.

5. Infiltration Ponds:

   - Stormwater system has been redesigned. These comments no longer applicable.

6. Modeling:
   a. Revise WWHM Modeling to be consistent with the plans. The model is a single basin routed to a single trench. Plans show five (5) infiltration trenches. Define each contributing basin and routing to each infiltration trench. Revise WWHM modeling based on updated detailed approach to infiltration facility sizing and groundwater mounding analysis in accordance with 2012 SWMMWW Vol III-3.3.8.

      - The stormwater system has been redesigned and modeled in WWHM2012. See comments above on design approach.

Garry Oaks:

1. The largest of the Gary Oaks in the development, located at the south of the small stand of Gary Oaks that are being preserved and protected, has a canopy of approximately 40' in radius, 80' in diameter. The canopy extends into the proposed road construction area including the sewer line (approximately 10'below grade), and over one of the infiltration ditches located in the open space area (approximately 12' below grade). Because of the root system most likely mirroring the canopy structure, it is very likely that the root system will be disturbed in the process of constructing the above-mentioned structures. An arborist report shall be required in order to ensure the protection and preservation of the Garry Oaks.

   - The site has been designed to limit disturbance to the Garry Oaks to the greatest extent feasible. The infiltration trenches that were previously planned have been removed and replaced with shallow bio-retention facilities. The approximate dripline has been shown on the plans. The project proponent had requested that the City provide the authority (code section or WAC) by which an arborist study was required and to date has not received guidance back on this issue. At this time no arborist report will be provided.

Streets:

1. Easements and R/W

    a. On C002 "Preliminary Circulation Layout", between lots 24 and 25, there is an opening for future connectivity to East Quail Lane from Rolling Hills Way. This property has no indication that it is a road easement. Who will be responsible for maintaining this property? Is there a road easement existing for Quail Lane through to Rolling Hills Way?

    - Based on subsequent discussions with the City, that open space area that was planned for future connectivity has been eliminated.

2. Road Design:

    a. The road must be 26' wide for 20' in either direction of the roadway at a Fire Hydrants per the 2015 IFC Fig D103.1. Please correct the road design in the location of the fire hydrants at:

        i. The intersection of Comfort Court and Comfort Way.

        ii. The intersection of Rolling Hills way and Comfort Way.

    - The roadways have been revised to the City of Sequim Neighborhood Street Standard which includes 24' of travelled ways.

3. Additional crosswalks

    a. To SW side of Comfort Way and Rolling Hills Way intersection.

    b. To NE side of Comfort Court and Comfort Way intersection.

    - The sidewalks have been revised per the Neighborhood street section to include sidewalk on only one side of the street. Crosswalks have been provided as necessary.

Traffic Impact Analysis:

- The traffic impact analysis comments have been previously dealt with by Mark Jacobs of Jake Traffic and the supplementary information required has been provided to the City.

Water:

1. This development can NOT connect to the existing 24" Diameter Transmission Water Main that traverses the south end of the development. This water is considered untreated and is not suitable for domestic use without further treatment at the Reservoir Rd water treatment facility.

    - The development will not connect to the existing 24" diameter transmission main.

2. Serving this subdivision from the 420 reservoir with the existing system would result in deficient service pressure for both normal and fire flow conditions.

    a. See the attached Memo dated Nov 29th, 2019, subject: Home Subdivision Phase B Water System Analysis.

    - A copy of this memo has not been received by the project proponent or this office to date. Please provide a copy of this memo if a response or design considerations are required.

b. An 8” water main is required to be installed to service this development, but due to anticipated build out requirements, a 10” main will be required to be installed, and the City is open to consideration of a Cost Sharing and Latecomers agreements to offset the extra cost to the developer.

- The site currently contains an 8” diameter main which runs through Phases B-1, B-2 and B-4. A 10” diameter main will be installed in lieu of an 8” main in Phase B-3.

3. Fire Hydrant spacing shall be in accordance with the 2015 International Fire Code (IFC), Appendix C. Table C105.1 of the aforementioned code requires, besides an average hydrant spacing of 500 feet (400 for dead end roads) limits the maximum distance from any point on a street or road frontage to a hydrant of 200 feet for a dead-end road. Verify that these standards have been achieved through this design.

- Four proposed fire hydrants are shown on the proposed plans with the maximum spacing being 480 feet and the maximum distance from any point on a street or road frontage on a dead end road being 145 feet.

We appreciate the opportunity to respond to these comments. Please contact us if there are further questions about this matter.

Respectively,



Seth Rodman, P.E.
Senior Design Engineer

Exhibit 12

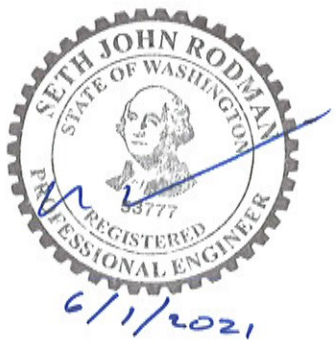
GEOTECHNICAL REPORT

HOME SUBDIVISION – PHASE B

FOR

GREEN CROW INVESTMENTS CO. LLC

ROLLING HILLS WAY & COMFORT WAY, SEQUIM, WA



PREPARED BY:

ZENOVIC & ASSOCIATES, INC.
301 EAST 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
360-417-0501

PROJECT NO. 18252

GEOTECHNICAL REPORT

HOME SUBDIVISION – PHASE B

FOR

GREEM CROW INVESTMENTS CO. LLC

ROLLING HILLS WAY & COMFORT WAY, SEQUIM, WA

1.0 INTRODUCTION

Zenovic & Associates, Inc. was retained by Green Crow Investments Company LLC to conduct a geotechnical investigation of the site for Phase B of the Home Subdivision located at the end of Rolling Hills Way and Comfort Way off of Silberhorn Road in Sequim, Washington. Phase B of the Home Subdivision includes 33 lots intended for single family residential use.

1.1 Site Location

The site is located on parcel number 03-30-30-59-0000 at the south end of the existing Rolling Hills Way and Comfort Way in Sequim, Washington. The subject property is within the SW ¼ of Section 30, Township 30 North, Range 3 West, W.M. The site is at latitude 48° 03' 55" North and longitude 123° 07' 22" West. The site location is shown on the Site Vicinity Map, Appendix A.

1.2 Proposed Construction

We understand that the proposed project consists of installation of infrastructure as needed to support 33 single family residences including roadways, sidewalks, and water, power, sewer and stormwater facilities. Roadway usage will be primarily for light automobiles with the occasional delivery and refuse/recycling trucks. Significant usage by large commercial vehicles is not expected.

1.3 Purpose

The purpose of this investigation was to evaluate the soil and groundwater conditions at the site, and to make geotechnical engineering recommendations for use in the development of the site and associated building construction schemes as well as for infrastructure design, including vehicle and pedestrian access, and the management of storm water runoff.

2.0 SITE INVESTIGATION

2.1 Site Description

The site lies south Comfort Way and Rollings Hills Way in Sequim, WA. Phase A of the Home Subdivision was constructed just to the north ot the project site. Construction of Phase A included extending the roadways for Comfort Way and Rolling Hills Way to the edge of Phase B as well as extending sewer and water to the edge of the property.

An existing 8" diameter water main was previously installed through the project site to provide connectivity in the Silberhorn Road area. This line is intended to remain and will be located within the extended Comfort Way roadway right of way. An additional 24" diameter water main crosses the southern portion of the site and is a transmission line from the Dungeness Infiltration Gallery.

A stormwater catchment system consisting of type 2 catch basins and 24" diameter storm piping was installed along the southeast property line. It appears that this system was installed to capture surficial offsite runoff and convey it around the subject property.

The site has been previously cleared although several large Garry Oak trees remain in the central portion of the site. The remainder of the site is vegetated with field grass and low brush (blackberries, wild rose, snowberry, etc.)

The site is generally level with a slight grade (3%) to the north. The adjacent property to the southeast contains a steep slope which parallels the southeastern property line of the site. This slope varies in height from approximately 30' to 50' and has an average slope of 50%. The area above this slope is pasture land and slopes to the northwest at grades between 5-8%.

The slope southeast of the site is well vegetated with a mix of deciduous and evergreen trees and low shrubs.

There were no defined drainage channels observed on the site.

2.2 Geologic Setting

The site lies within the Strait of Juan de Fuca branch of the Georgia Depression. The Strait of Juan de Fuca Branch was occupied by the Juan de Fuca lobe of the Cordilleran ice sheet during the Vashon Stade of the Fraser Glaciation.

The Washington Division of Geology and Earth Resource (WDGER), Geologic Map of Washington – Northwest Quadrant, dated 2002, indicates that the site is located in an area mapped as Qoa - non-glacial Older Alluvium, undivided (Holocene). Older Alluvium consists of stratified gravel, cobbles, sand and silt in terraces above modern flood plains. It is not uncommon for soils to be iron stained. These areas include alluvial-fan, landslide, and colluvial deposits. No active or inactive fault lines are found in the project vicinity. See Appendix C for geologic setting map.

The adjacent slope and area above the slope are mapped as Qgd - Vashon Drift, undivided (Pleistocene). Vashon drift consists of random mixtures of sand and gravel, lodgment till, sandy ablation till, and lacustrine silts.

2.3 USDA Soil Conservation Service Soils Information

The USDA National Resources Conservations Services (NRCS) soil report for the site indicates that the near surface soils at the site consists of Sequim very gravelly sandy loam and Sequim-McKenna-Muckilteo complex. Soils on and above the steep slope on the adjacent property consist of Clallam gravelly sandy loam. See appendix D for NRCS soil report.

Sequim very gravelly sandy loam is an outwash material typically consisting of gravelly sandy loam near the surface (0-10 inches deep), extremely cobbly loamy sand from 10-23 inches and extremely cobbly sand below with a depth to water table or restrictive layer of greater than 80 inches. The soils are classified as a group A hydrologic soils (soils having a high infiltration rate (low runoff potential) when thoroughly wet. These soils consist mainly of deep, well drained to excessively drained sands or gravelly sands, and have a high rate of water transmission). The Sequim soils have a low susceptibility to liquefaction.

The Sequim-Mckenna-Mukilteo soils consist of a mixture of soil types. The Sequim soil portion is as described above. The Mckenna and Mukilteo portions are more poorly drained finer materials with limited depths to groundwater or restrictive layer. The McKenna and Mukilteo soil areas are defined as having moderate to high liquefaction susceptibility.

The Clallam gravelly sandy loam soils have moderate permeability to a glacial till layer and very slow through it. Available water capacity is low, runoff is medium, and the hazard of water erosion is slight.

2.4 Subsurface Exploration

Ten (10) test pits were excavated at random, representative locations throughout the site. Test pit locations are included in Appendix B. Test pits were advanced to depths ranging from 6 feet to 10 feet. Typically, the soil conditions consisted of minimal sandy loam topsoil over extremely cobbly loamy sand. Soils in the southwestern portion of the site tended to included additional loam and muck materials in the near surface soils consistent with the McKenna and Mukilteo soil types. However, those finer grained material, where encountered were interspersed with the Sequim soils and underlain by them. Test pit logs are included as Appendix B. 5 soil samples were collected as indicated on the test pit log. A sieve analysis of each of the materials was completed. The analysis is included as Appendix B.

An additional 4 test pits were excavated on February 7th, 2020 directly following a major storm event to observe groundwater conditions. At that time groundwater was encountered at approximately 48" below ground surface and some ponding was observed at the south end of the site due to offsite run-on.

2.5 Groundwater

During the initial investigation test pits 5-7 exhibited some signs of some signs of groundwater or perched water with scattered inclusions of mottled loam and or loam/clay bands. Test pit #6 specifically was moist at the bottom of the pit, but no standing water was observed. No groundwater or perched water was encountered during that initial investigation.

During the follow-up investigation groundwater was observed at approximately 48" below ground surface throughout the site.

2.6 Seismic Information

Although the Mckenna/Mukilteo soils are susceptible to liquefaction, they are not the predominate soil type on this parcel and where they are present, they are intermixed with the Sequim soils and underlain by them which mitigates the risk of liquefaction. It is the opinion of this office that the liquefaction susceptibility of this site is low and special construction methods/conditions are not warranted.

Site specific data is not available to a depth of 100 feet. Available geologic data, however, indicates that a Site Design Class D as per Table 1613.5(2) of the International Building Code is appropriate for this site.

Ground motion accelerations for the site were obtained from the Structural Engineers Association of California (SEAOC) Seismic Design Mapping website. The latitude/longitude method was used to obtain ground motions at latitude of 48.06547 degrees N and longitude of 123.12273 degrees W using 2008 data tables. The results of the analysis are included in Appendix A.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 General

The recommendations for design and construction presented in the following sections are based on our understanding of the proposed construction (Section 1.2), engineering assessment of the anticipated subsurface conditions (Section 2.4), and experience with similar projects in similar soil conditions. If there is any change in the project criteria, a review should be made by this office prior to final design and construction at the site.

3.2 Building Foundations

Based on our understanding of the proposed uses at the project, typically structures will consist of single-family residences constructed on conventional concrete foundations or concrete slab on grade. Excavations for footings and slabs on grade should be carried to firm and unyielding native bearing materials. In this case this material is typically the extremely cobbly sand below the surficial sandy loam materials.

We recommend that a vertical allowable bearing capacity of 2,000 pounds per square foot (psf) should be used for the design of the foundation where the extremely cobbly sand is reached. A lateral allowable bearing capacity of 150 psf per foot of depth and a sliding coefficient of 0.25 are recommended. See table 1806.2 of the International Building Code (2018) for further information.

3.3 Slab on Grade Construction

We recommend that the slabs-on-grade be separated from the exterior foundation system (independent footing/stemwall and slab construction) rather than a monolithic pour construction to accommodate anticipated differential settling that may occur due to the potential variability of the subsurface soils. Any unsuitable or unconsolidated material under the slab should be removed and replaced with suitable structural fill or scarified and recompacted. Fill or replaced material should be compacted to 92% of maximum dry density as determined by ASTM-D-1557.

A 6" thick of gravel backfill capillary break material conforming to the requirements of WSDOT Standard Specification Section 9-03.12(4) should be placed on the prepared slab subgrade and consolidated with a vibratory plate compactor until this layer is dense and unyielding. Approximately 1" to 2" below the slab bottom grade, a layer of minimum 6 mil thickness polyethylene vapor barrier should be installed; layer seams should lap no less than 12 inches. A layer of well drained sand conforming to Section 9-03.13 of the Standard Specifications should be placed up to the slab bottom grade to enhance the absorption of concrete bleed water and improve concrete cure and finishing.

3.4 Roadways

Excavation for roadways should be extended to firm and unyielding native bearing materials. In this case this material is typically the extremely cobbly sand below the surficial sandy loam materials. Unsuitable or unconsolidated materials encountered should be excavated and replaced with structural fill and compacted to 95% dry density as determined by ASTM-D-1557 or, if materials are suitable for use, scarified to a minimum depth of 12" and compacted to 95% dry density.

The following structural section is recommended for this site and anticipated traffic loads and volumes:

Roadways	Sub-base	8" min. of ballast per WSDOT 9-03.9(1)
	Top rock	3" min. of CSTC per WSDOT 9-03.9(3)
	Pavement	3" min. of HMA Class ½" PG64-22

3.5 Drainage

Soils onsite are relatively free-draining. Soil samples collected from the site were analyzed for grain-size distribution which was then correlated to design infiltration rates pre recommendations in the *Stormwater Management Manual for Western Washington (ECY, 2014)*. Based on those correlations and observed site conditions an infiltration rate of 5 inches per hour is conservative. Due to the seasonal fluctuation in groundwater, infiltrations systems should be shallow systems and where possible be

distributed throughout the site to prevent point loading and the subsequent groundwater mounding that may occur.

Runoff from residences and associated driveways, pathways, etc. should be infiltrated on each individual parcel through the use of infiltration trenches or rain garden/bioretention areas. Infiltration trenches should be sized to include 20 lineal feet of infiltration trench per every 1,000 square feet draining to them. Further guidelines for layout and installation of stormwater infiltration facilities can be found in the *Stormwater Management Manual for Western Washington (ECY, 2014)*.

3.6 Groundwater Influence on Structures/Construction

Due to the seasonal fluctuation of the groundwater table, consideration should be taken when planning the project to ensure impacts are minimized. Major construction should be limited to the dry season (May 1 – September 30). Construction beyond the dry season may require dewatering and special compaction requirements.

3.7 Offsite Steep Slope

Based on review of site conditions and available historical record, the existing slope located southeast of the site has minimal risk of slope failure. Any failure is likely to be in the form of slow soil creep and no large-scale failures are anticipated. A setback of 15' from the property line adjacent to this slope is recommended. This setback will effectively maintain a minimum setback of 35' from the minimal landslide hazard area (defined as where the existing slope exceeds 40%).

4.0 CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

4.1 General

Variations in soil conditions are anticipated to be encountered during construction. In order to correlate design concepts with actual soil conditions, we recommend that technical or engineering personnel be present to provide monitoring and geotechnical engineering services during construction and to assist in developing design changes in the event that subsurface conditions differ from those outlined in his report.

The following sections of this report include comments on items related to excavation, dewatering, foundation construction, earthwork, and related geotechnical aspects of the proposed construction. This section is written primarily for the engineer responsible for the preparation of plans and specifications for the work. This section also addresses construction issues related to foundations and earthwork and will aid personnel who monitor construction activities.

The contractor must evaluate potential construction problems on the basis of their knowledge and experience in this area and on the basis of similar projects in other localities, taking into account their own proposed construction methods and procedures.

4.2 Construction Excavation Slopes

The Contractor should become familiar with and be aware of applicable local, state, and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

Construction site safety is the sole responsibility of the Contractor, who shall also be solely responsible for means, methods, and sequencing of construction operations. Zenovic & Associates, Inc. is providing this information solely as a service to our Client. Under no circumstances should the information provided below be interpreted to mean that Zenovic & Associates, Inc. is assuming responsibility for construction site safety or the Contractor's activities; such responsibility is not being implied and should not be inferred.

The Contractor should be aware that slope height, slope inclination, or excavation depths should in no case exceed those specified in local, state, or federal regulations, e.g. OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if they are not followed, the Contractor or its subcontractors could be held liable for substantial penalties.

For this site, subsurface conditions encountered include sandy soils. Generally sandy soils are considered Type C soils when applying OSHA regulations. For excavations less than 20 feet deep OSHA recommends a maximum slope of 1.5 horizontal to 1 vertical for Type C soils.

The soils penetrated by the proposed excavations may vary significantly across the site. Our preliminary soil classification is based on discrete test pit excavations. The Contractor should continually classify the soils that are encountered as excavation progresses with respect to the OSHA system.

For excavations that are extended to a depth of more than 20 feet it will be necessary to have side slopes designed by a professional engineer registered in the State of Washington. It is likely that slopes flatter than those outlined above will be required. This side slope design, if such conditions are anticipated, should be a required construction submittal.

As a safety measure, it is recommended that all vehicles and soils piles be kept a minimum lateral distance of 2 feet from the crest of the slope as recommended by OSHA. The exposed slope face should be protected against the elements.

4.3 Site Grading and Earthwork

A. Site Preparation

All areas that will support footings, floor slabs, exterior concrete and pavements should be properly prepared. All wood debris at the near surface should be removed and not incorporated into any fill materials. After rough grade has been established in cut areas and prior to any placement of fill in fill areas, the exposed subgrade should be carefully

inspected by probing and testing as needed. Any topsoil or other organic materials still in place, frozen, wet, soft, or loose soil and other undesirable materials, as determined by the geotechnical engineer, should be removed.

The exposed subgrade should further be evaluated by proof rolling with a heavy weight vehicle to check for pockets of soft material hidden beneath a thin crust of dense soil. Any unsuitable materials thus exposed should be removed. The exposed materials should be scarified, and moistened or dried if necessary, to a minimum depth of 12 inches. The scarified material should then be compacted as outlined in Section 4.3(E) of this report. Areas where stable soils are encountered at subgrade levels should also be scarified and compacted as outlined in Section 4.3(E) prior to fill placement.

Care should be exercised during the grading operations on the site. The grading should be done during the dry season, if at all possible. While the near surface soils do not appear to have significant silts and clays that could cause pumping and general deterioration of the surface soils, excessive traffic of heavy equipment (including heavy compaction equipment) should be avoided if excess surface water is present.

B. Fill Placement and Compaction

Fill should be placed in maximum 8-inch loose lifts and compacted according to the specifications outlined in Section 4.3(E). Only lightweight compaction equipment (hand-held or walk behind) should be operated adjacent to foundation and retaining walls.

Field density tests should be performed on each lift as necessary to verify that adequate compaction is being achieved. Compaction of any material by flooding is not considered acceptable. This method will generally not achieve the desired compaction and the large quantities of water will tend to soften and/or cause swelling of the deep subgrade soils.

C. Structural Fill

Structural fill should be non-plastic material with less than 10% fines (percent passing the No. 200 sieve). Material meeting the requirements for gravel Base per Section 9.03.10 of the WSDOT Standard Specifications On-site soils are likely suitable for structural fill but must be approved on an a case-by-case basis.

Any fine soils, consisting of silt or clay material, are not considered suitable for structural fill. Any imported structural fill should be tested and approved prior to use on the site.

D. Utility Trench Backfill

Utility trench backfill placed in or adjacent to streets, buildings or exterior slabs should be compacted as recommended in Section 4.3(E) of this report. Pipe bedding should be in accordance with pipe manufacturer's recommendations and approved project plans.

E. Recommended Compaction Specifications

Recommended compaction specifications are as follows:

1. Structural fill and recompacted native soils beneath footings

   Granular soils should be compacted to 95% of the maximum dry density as determined by Modified Proctor (ASTM D-1557) within +/- 2% of optimum moisture content; cohesive soils are not recommended for this application

2. Structural fill and recompacted native soils beneath floors slabs and behind foundation walls

   Granular soils should be compacted to 92% of the maximum dry density as determined by Modified Proctor (ASTM D-1557) within +/- 2% of optimum moisture content; cohesive soils are not recommended for this application

3. Structural fill and recompacted native soils beneath pavements, exterior concrete, and general site fill

   Granular soils should be compacted to 95% of the maximum dry density as determined by Modified Proctor (ASTM D-1557) within +/- 2% of optimum moisture content; cohesive soils should be compacted to 95% of maximum dry density as determined by Modified Proctor with moisture within -1% to +3% of optimal

4. Utility trench backfill in and adjacent to roads, building and exterior slabs

   Granular soils should be compacted to 95% of the maximum dry density as determined by Modified Proctor (ASTM D-1557) within +/- 2% of optimum moisture content; cohesive soils should be compacted to 95% of maximum dry density as determined by Modified Proctor with moisture within -1% to +3% of optimal

F. Infiltration System Excavation

Care should be taken when constructing infiltration facilities to prevent "blinding" (decrease in infiltrative capacity by filling of voids with fine materials) and over compaction of receptor materials. Infiltration facilities should be protected from receiving sediment laden runoff through the use of berms, silt fence or other means to direct water away from the facilities during construction. Heavy equipment shall not traverse the bottom of infiltration facilities and bottom and sides of facilities should be scarified prior to backfill.

G. Groundwater Considerations

Groundwater conditions are described in Section 2 of this report. Due to the seasonal fluctuations in the groudwater levels, major construction should be limited to the dry season (May 1 – September 30). Major construction is defined as construction of utilities within the proposed rights of way, and construction of street and associated appurtenances. Based on our findings during the initial investigation, if major construction is conducted during the dry season, it is anticipated that dewatering for those activities will not be required.

However, if earthwork is performed during or soon after periods of precipitation, the subgrade soils may become saturated, pump, or not respond to densification techniques. Typical remedial measures include discing and aerating the soil during dry weather, mixing the soil with dryer material, removing and replacing the soil with an approved fill material, or mixing the soil with an approved lime or cement product. Our firm should be consulted prior to implementing remedial measures to observe unstable subgrade conditions and provide appropriate recommendations.

Major construction beyond the dry season will likely require dewatering and special compaction requirements.

Minor construction including future development of the lots as single family residences will be less affected by groundwater impacts as the typical excavation depths will be shallower than the observed high groundwater. It is recommended that any deep excavations be limited to the dry season to mitigate any impact from or to groundwater.

5.0 REVIEW AND CONSTRUCTION OBSERVATIONS

Variations in subsurface conditions will likely be encountered during construction at the site. To permit correlation between the investigation data and the conditions encountered during construction, and to provide conformance with the plans and specifications as originally contemplated, it is recommended that a geotechnical engineer be retained to provide continuous observations of construction operations and to provide quality control testing of fill, asphalt, and base course placement and compaction.

6.0 LIMITATIONS

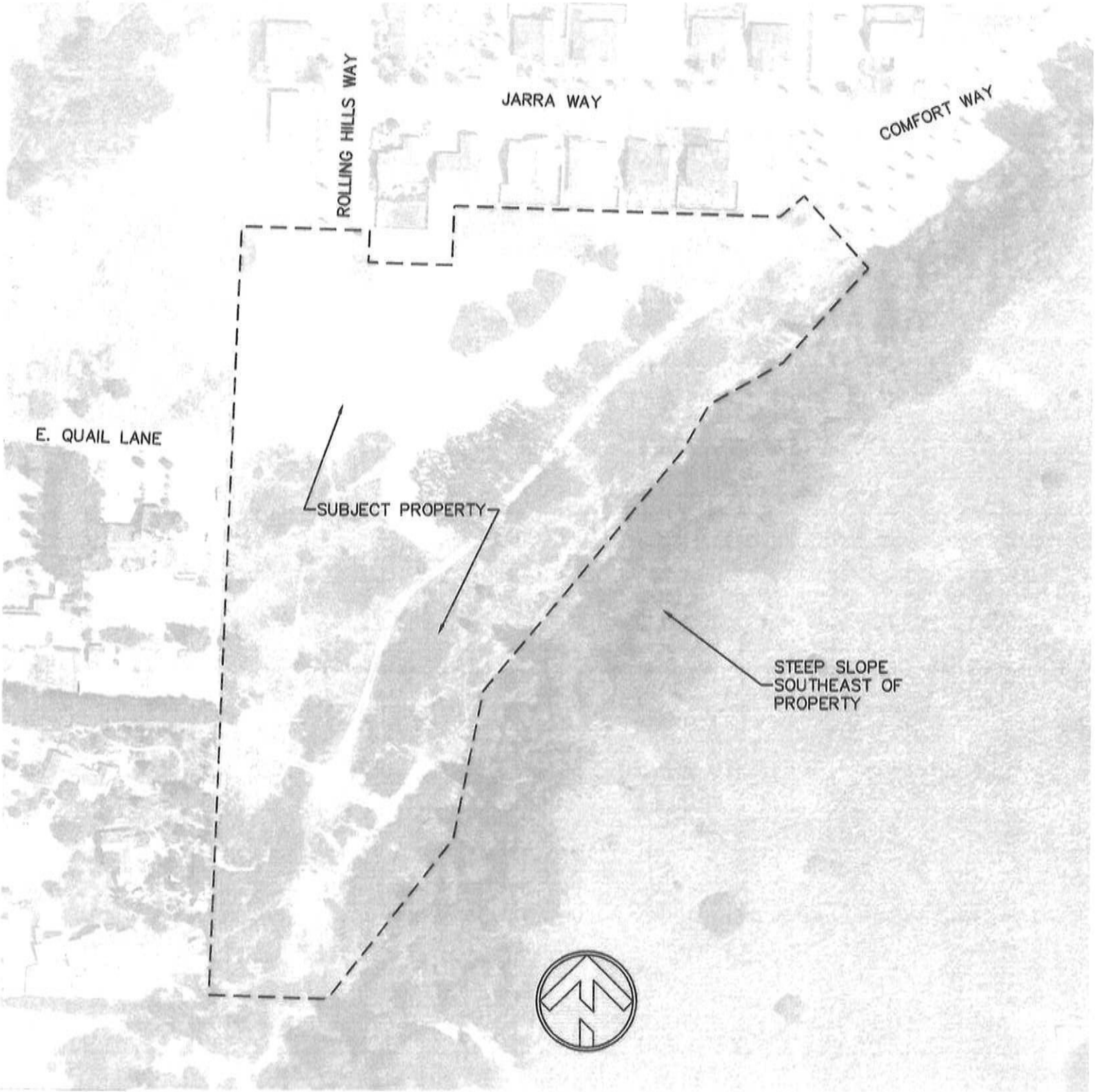
This report has been prepared for Green Crow Investments Company LLC and their selected design consultants for use in the development of the subject project. Information provided in this report has been collected and interpreted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions, and in accordance with sound and generally accepted principles consistent with normal consulting practice. No other warranty, expressed or implied, including (but not limited to) any warranty or merchantability or fitness for a particular use has been made.

In the event that change in nature, design, or location of the proposed construction is made, or any physical changes to the site occur, recommendations are not considered valid unless the changes are reviewed by our firm and conclusions of this report are modified or verified in writing.

The scope of Zenovic's services did not include an environmental assessment for the presence or absence of 1) hazardous and/or toxic materials, in the soil, groundwater, surface water, or atmosphere, and 2) wetlands. Any statements or absence of statements in this report on any subsurface exploration log regarding staining or odor of soil, groundwater, surface water, unusual or suspicious items, or conditions observed are strictly descriptive information for Green Crow Investments Company LLC.

Appendix A

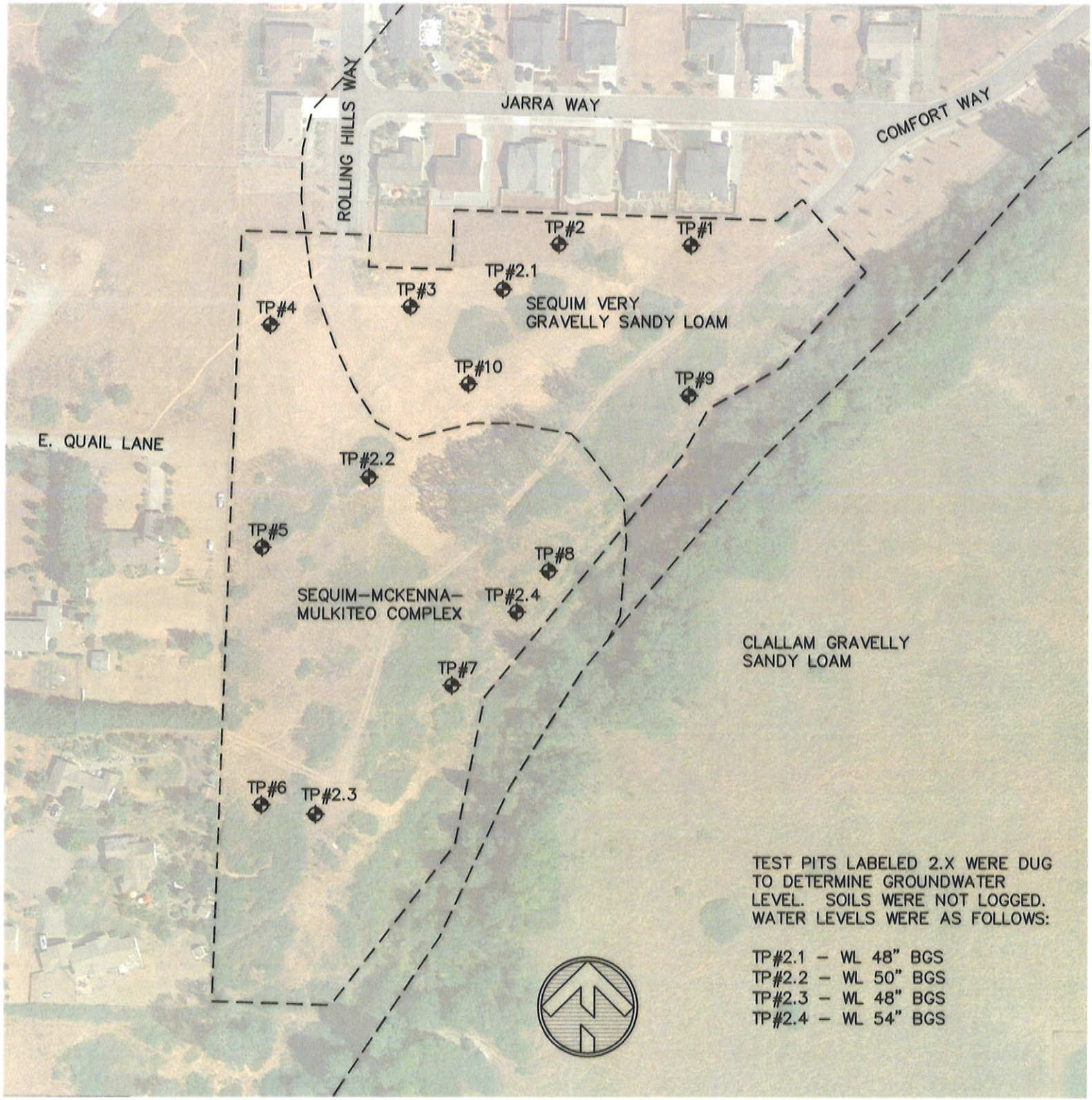
Location Map



SCALE: NO SCALE	TITLE: HOME SUBDIVISION – PHASE B EXHIBIT 1 - LOCATION MAP	SHEET 1
DATE: 8/5/2019		
JOB NO: 18252	CLIENT: GREEN CROW INVESTMENTS CO. LLC P.O. BOX 2439 PORT ANGELES, WA 98362	OF 1
FILE: EP-G	ZENOVIC & ASSOCIATES INCORPORATED 301 EAST 6TH ST. SUITE 1 PORT ANGELES, WA 98362 PHONE: (360) 417-0501 FAX: (360) 417-0514 EMAIL: ZENOVIC@ZENOVIC.NET	

Appendix B

Test Pit Logs and Mapping



SCALE: NO SCALE	TITLE: *HOME SUBDIVISION – PHASE B*	SHEET 1
DATE: 6/1/2021	EXHIBIT 2 - TEST PIT LOCATIONS	
JOB NO: 18252	CLIENT: *GREEN CROW INVESTMENTS CO. LLC* *P.O. BOX 2439* *PORT ANGELES, WA 98362*	ZENOVIC & ASSOCIATES INCORPORATED 301 EAST 6TH ST. SUITE 1 PORT ANGELES, WA 98362 PHONE: (360) 417–0501 FAX: (360) 417–0514 EMAIL: ZENOVIC@ZENOVIC.NET
FILE: EP–G		OF 1

TEST PIT TP- 1

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 323.0
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-0.33' sandy Loam (Topsoil)				
	GP/ GW	0.33'-7.0' sandy Gravel w/cobbles				
5						
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 2

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 324.0
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0' sandy Loam (Topsoil)				
	GP/ GW	1.0'-4.0' sandy Gravel w/cobbles				
5	SW/ SP	4.0'-6.66' very gravelly Sand w/cobbles (Pockets of clean sand)	**S-1**	**Grab**	**6.5**	GP/GW
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 3

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 326.5
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0 sandy Loam (Topsoil)				
	GP/ GW	1.0'-3.0' loamy sandy Gravel w/cobbles				
5	GP/ GW	3.0'-7.0' sandy Gravel w/cobbles				
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 4

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 326.5
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0 sandy Loam (Topsoil)				
	GP/ GW	1.0'-3.33' loamy sandy Gravel w/cobbles				
5	GP/ GW	3.33'-6.67' sandy Gravel w/cobbles (very large cobble 18"diameter and larger)				
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 5

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 335.5
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-2.0' Brownish-Black Gravelly Topsoil				
	SM/ ML	2.0'-4.0' very gravelly Silt				
5	GW/ GP	4.0'-7.0'sandy Gravel w/cobbles (with bands/pockets of gray silt)	**S-1**	**Grab**	**6.5**	GP/GW
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 6

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 344.0
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0' Brownish-Black Gravelly Topsoil				
	SM/ ML	1.0'-2.5' Very Gravelly Sandy Loam w/cobbles				
	GW/ GP	2.5'-5.33'Sandy Gravel w/cobbles (moist band of mottled loam/clay at 60")				
5		Unable to progress excavation further due to large cobbles				
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 7

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 340.5
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0' sandy Loam (topsoil)				
	GM/ GP	1.0'-2.67' loamy sandy Gravel w/cobbles				
	GW/ GP	2.67'-6.67'sandy Gravel w/cobbles (scattered inclusions of mottled loam)				
5			S-7	Grab	6.0	SW/SP
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 8

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 337.0
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-0.83' sandy Loam (topsoil)				
	SM/ ML	0.83'-2.67' gravelly sandy Loam				
5	GW/ GP	2.67'-5.5 sandy Gravel w/cobbles (dense at bottom)				
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 9

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 329.5
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0' sandy Loam (topsoil)				
	GM/ GP	1.0'-2.0' loamy sandy Gravel				
	GW/ GP	2.0'-5.0 sandy Gravel w/cobbles	S-9	Grab	5	GW/GP
5						
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

TEST PIT TP- 10

Project Name: Home Subdivision – Phase B
Client: Green Crow Investments Co. LLC
Project Number: 18252

Test Pit Elevation: 330.0
Test Pit Location: See Site Plan.
Depth to Groundwater: None encountered

DEPTH (FT.)	USGS Classification	VISUAL PHYSICAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (FT.)	LABORATORY TESTING RESULTS FOR SAMPLE
0	OL	0'-1.0' sandy Loam (topsoil)				
	GM/ GP	1.0'-2.5' loamy sandy Gravel				
	GW/ GP	2.5'-6.0 sandy Gravel w/cobbles				
5						
10						
15						

Excavation Contractor: Owner
Excavation Equipment: Track hoe
Operator: Bruce Emery

Excavation Date: 8/2/18
Z&A Representative: SJR

Appendix C

Sieve Analyses and Infiltration Rate Calculations

NTI MATERIALS TESTING LABORATORY

Engineers - Land Surveyors - Geologists
Construction Inspection - Materials Testing

NTI

717 SOUTH PEABODY, PORT ANGELES, WASHINGTON 98362, (360) 452-8491

Specimen Control #	18198

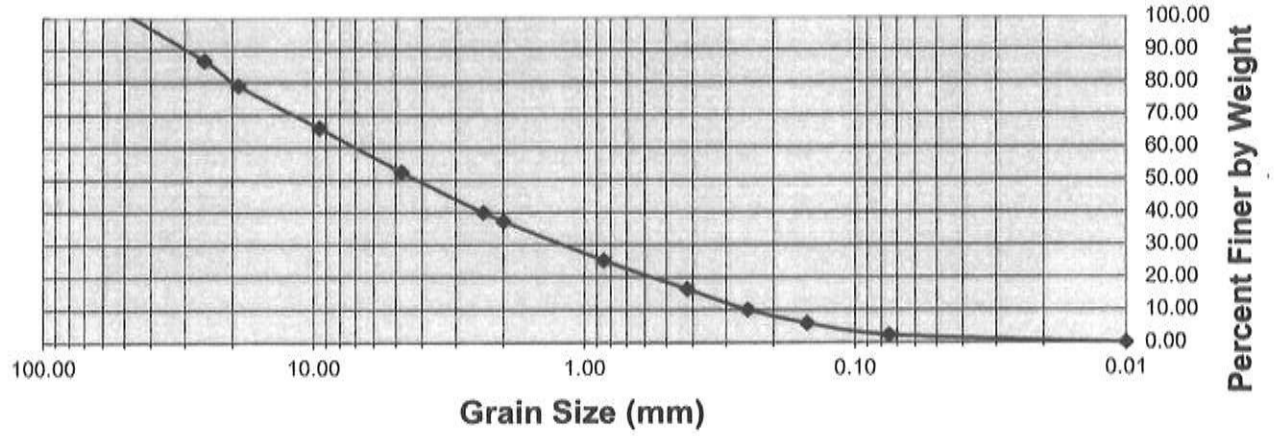
GRADATION SIEVE ANALYSIS

ASTM C-136

Client:	Zenovic & Associates	Date:	Collected on 8/2/2018
Project:	Ref# 18252	Sample taken by:	Seth Rodman
BILLING INFORMATION		Material:	#2
Lab Account #:	ZZCLAB-22	Source:	
Client Contact:	Seth Rodman	Tested By:	S. West
Email:	zenovic@olympus.net	Date Tested:	9/19/2018
Phone#:	360-471-0501	Test requested:	Wet / Dry Sieve: WET
Remarks:		Reviewed:	D. Eaton

Sieve Dia (mm)	Sieve Size	Dry Wt. (grams)	% Retained	% Passing
50.800	**2"**	0.0	0.0%	101.8%
25.400	**1"**	1357.4	15.0%	86.8%
19.000	**3/4"**	699.9	7.7%	79.1%
9.510	**3/8"**	1192.4	13.1%	66.0%
4.750	**#4**	1222.8	13.5%	52.5%
2.380	**#8**	1132.8	12.5%	40.0%
2.000	**#10**	243.6	2.7%	37.3%
0.850	**#20**	1095.8	12.1%	25.2%
0.420	**#40**	797.7	8.8%	16.5%
0.250	**#60**	575.9	6.3%	10.1%
0.150	**#100**	370.8	4.1%	6.0%
.075	**#200**	335.7	3.7%	2.3%
0	**Pan**	210.7	2.3%	

Start Weight:	9235.5
End Weight:	9076.1
Washed Weight	159.4
D10:	0.14
D30:	1.30
D60:	7.00
Cu:	50.00
Cc:	1.72
Soil Classification:	GW or GP



REMARKS:

NTI MATERIALS TESTING LABORATORY

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Construction Inspection — Materials Testing

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Specimen Control # 18199

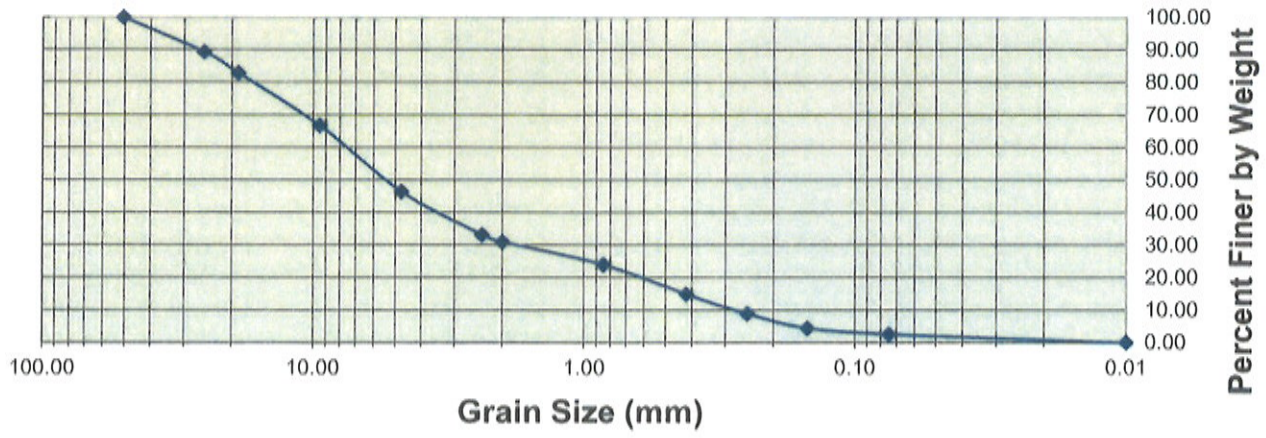
GRADATION SIEVE ANALYSIS

ASTM C-136

Client:	Zenovic & Associates	Date:	Collected on 8/2/2018
Project:	Ref#18252	Sample taken by:	Seth Rodman
BILLING INFORMATION		Material:	#5
Lab Account #:	ZZCLAB-22	Source:	#5 test pit
Client Contact:	Seth Rodman	Tested By:	Zack Olson
Email:	zenovic@olympus.net	Date Tested:	9/20/2018
Phone#:	360-471-0501	Test requested:	Wet / Dry Sieve: WET
Remarks:		Reviewed:	S. West

Sieve Dia (mm)	Sieve Size	Dry Wt. (grams)	% Retained	% Passing
50.800	**2"**	0.0	0.0%	100.0%
25.400	**1"**	1248.7	10.6%	89.4%
19.000	**3/4"**	771.4	6.6%	82.8%
9.510	**3/8"**	1891.4	16.1%	66.7%
4.750	**#4**	2377.5	20.2%	46.5%
2.380	**#8**	1564.2	13.3%	33.1%
2.000	**#10**	260.8	2.2%	30.9%
0.850	**#20**	808.3	6.9%	24.0%
0.420	**#40**	1073.5	9.1%	14.9%
0.250	**#60**	712.0	6.1%	8.8%
0.150	**#100**	517.4	4.4%	4.4%
.075	**#200**	222.0	1.9%	2.5%
0	**Pan**	298.2	2.5%	

Start Weight:	11800.4
End Weight:	11745.7
Washed Weight	298.2
D10:	0.29
D30:	2.00
D60:	7.50
Cu:	25.86
Cc:	1.84
Soil Classification:	GW or GP



REMARKS:

NTI MATERIALS TESTING LABORATORY

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Construction Inspection — Materials Testing

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Specimen Control #	18200

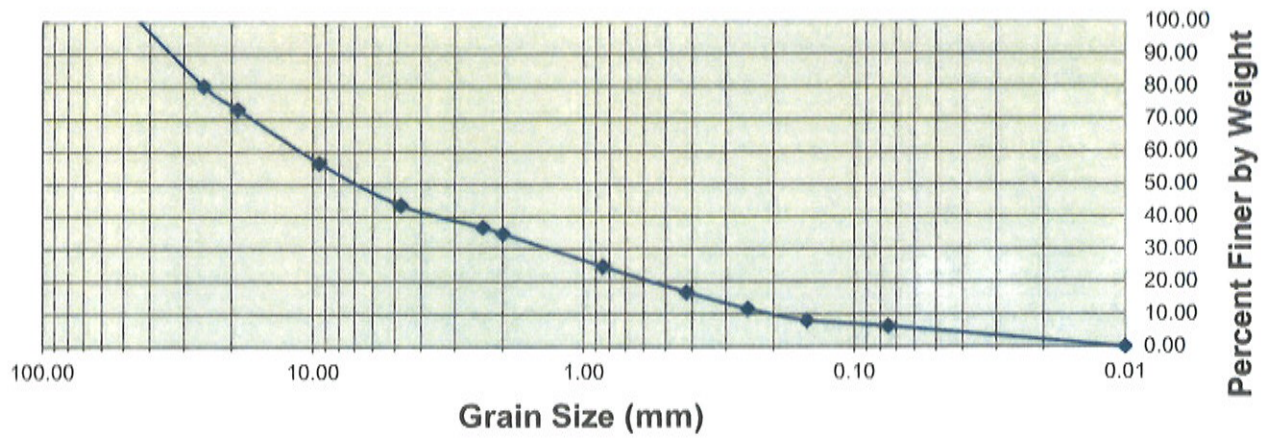
GRADATION SIEVE ANALYSIS

ASTM C-136

Client:	Zenovic & Associates	Date:	Collected on 8/2/2018
Project:	Ref#18252	Sample taken by:	Seth Rodman
BILLING INFORMATION		Material:	#7
Lab Account #:	ZZCLAB-22	Source:	
Client Contact:	Seth Rodman	Tested By:	S. West
Email:	zenovic@olympus.net	Date Tested:	9/20/2018
Phone#:	360-471-0501	Test requested:	Wet / Dry Sieve: WET
Remarks:		Reviewed:	D. Eaton

Sieve Dia (mm)	Sieve Size	Dry Wt. (grams)	% Retained	% Passing
50.800	**2"**	0.0	0.0%	105.8%
25.400	**1"**	3195.0	25.7%	80.1%
19.000	**3/4"**	888.9	7.1%	73.0%
9.510	**3/8"**	2045.1	16.4%	56.6%
4.750	**#4**	1612.7	13.0%	43.6%
2.380	**#8**	851.2	6.8%	36.8%
2.000	**#10**	245.0	2.0%	34.8%
0.850	**#20**	1260.7	10.1%	24.7%
0.420	**#40**	975.4	7.8%	16.8%
0.250	**#60**	645.5	5.2%	11.6%
0.150	**#100**	437.2	3.5%	8.1%
.075	**#200**	228.6	1.8%	6.3%
0	**Pan**	781.4	6.3%	

Start Weight:	13166.7
End Weight:	12443.1
Washed Weight	723.6
D10:	0.20
D30:	1.40
D60:	10.20
Cu:	51.00
Cc:	0.96
Soil Classification:	SW(SM or SC) or SP(SM or SC)



REMARKS:

NTI MATERIALS TESTING LABORATORY
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Specimen Control # 18201

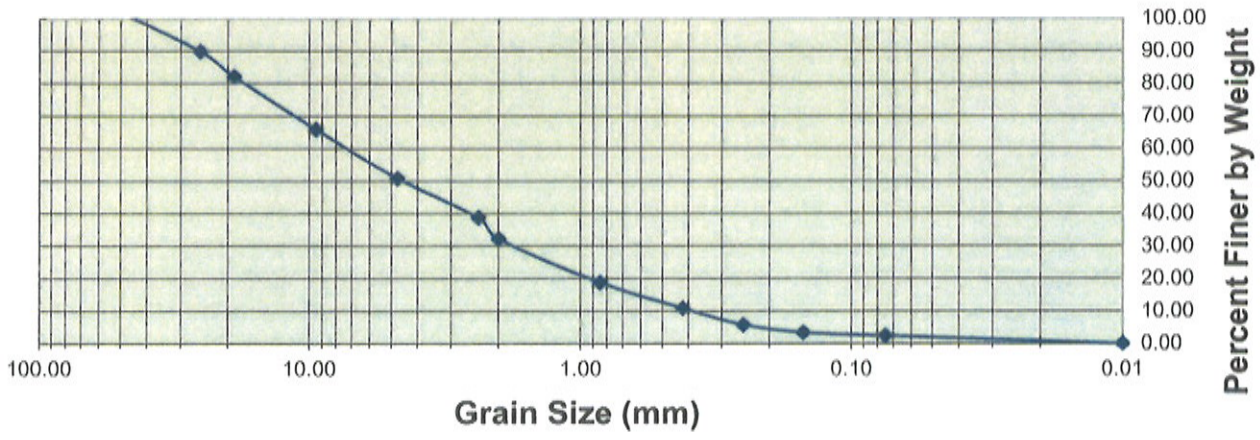
GRADATION SIEVE ANALYSIS

ASTM C-136

Client:	Zenovic & Associates	Date:	Collected on 8/2/2018
Project:	Ref#18252	Sample taken by:	Seth Rodman
BILLING INFORMATION		Material:	#9
Lab Account #:	ZZCLAB-22	Source:	
Client Contact:	Seth Rodman	Tested By:	S. West
Email:	zenovic@olympus.net	Date Tested:	9/19/2018
Phone#:	360-471-0501	Test requested:	Wet / Dry Sieve: WET
Remarks:			Reviewed: D. Eaton

Sieve Dia (mm)	Sieve Size	Dry Wt. (grams)	% Retained	% Passing
50.800	**2"**	0.0	0.0%	102.2%
25.400	**1"**	1298.7	12.3%	89.9%
19.000	**3/4"**	824.2	7.8%	82.1%
9.510	**3/8"**	1717.4	16.2%	65.9%
4.750	**#4**	1588.1	15.0%	50.9%
2.380	**#8**	1280.8	12.1%	38.8%
2.000	**#10**	701.2	6.6%	32.2%
0.850	**#20**	1410.8	13.3%	18.8%
0.420	**#40**	833.3	7.9%	11.0%
0.250	**#60**	541.6	5.1%	5.8%
0.150	**#100**	255.1	2.4%	3.4%
.075	**#200**	105.6	1.0%	2.4%
0	**Pan**	256.3	2.4%	

Start Weight:	10813.1
End Weight:	10579.2
Washed Weight	233.9
D10:	0.37
D30:	1.80
D60:	7.40
Cu:	20.00
Cc:	1.18
Soil Classification:	GW or GP



REMARKS:

INFILTRATION RATE CALCULATION - GRAIN SIZE ANALYSIS

PROJECT: Home Subdivision - Phase B
LOCATION: Rolling Hills Way and Comfort Way
PARCEL NO: 03-30-30-59-0000

ZENOVIC & ASSOCIATES
301 EAST 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
DATE: 8/5/2019
JOB NO. 18252
AUTHOR: SJR

Location TP #2

D_{10}	0.14
D_{60}	7
D_{90}	30
%Fines	0.023

K_{sat}initial (cm/s)	0.023
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0066
K_{sat}design (in/hr)	9.4

Location TP #5

D_{10}	0.29
D_{60}	7.5
D_{90}	25
%Fines	0.025

K_{sat}initial (cm/s)	0.052
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0150
K_{sat}design (in/hr)	21.3

Location TP #7

D_{10}	0.2
D_{60}	10.2
D_{90}	32
%Fines	0.065

K_{sat}initial (cm/s)	0.026
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0074
K_{sat}design (in/hr)	10.5

$$\log_{10}(K_{sat}) = -1.57 + 1.90D_{10} + 0.015D_{60} - 0.013D_{90} - 2.08f_{fines}$$

Total Correction Factor, $CF_T = CF_v \times CF_t \times CF_m$

$K_{sat\ design} = K_{sat\ initial} \times CF_T$

Table 3.3.1
Correction Factors to be Used With In-Situ Saturated Hydraulic Conductivity Measurements to Estimate Design Rates.

Issue	Partial Correction Factor
Site variability and number of locations tested	CF_v = 0.33 to 1.0
Test Method	
Large-scale PIT	CF_t = 0.75
Small-scale PIT	= 0.50
Other small-scale (e.g. Double ring, falling head)	= 0.40
Grain Size Method	= 0.40
Degree of influent control to prevent siltation and bio-buildup	CF_m = 0.9

INFILTRATION RATE CALCULATION - GRAIN SIZE ANALYSIS

PROJECT: Home Subdivision - Phase B
LOCATION: Rolling Hills Way and Comfort Way
PARCEL NO: 03-30-30-59-0000

ZENOVIC & ASSOCIATES
301 EAST 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
DATE: 8/5/2019
JOB NO. 18252
AUTHOR: SJR

Location TP #9

D10	0.37
D60	7.4
D90	25
%Fines	0.024

Ksatinitial (cm/s)	0.074
CFv	0.8
CFt	0.4
CFm	0.9
Ksatdesign (cm/s)	0.0213
Ksatdesign (in/hr)	30.2

Location

D10	
D60	
D90	
%Fines	

Ksatinitial (cm/s)	
CFv	0.8
CFt	0.4
CFm	0.9
Ksatdesign (cm/s)	
Ksatdesign (in/hr)	

Location

D10	
D60	
D90	
%Fines	

Ksatinitial (cm/s)	
CFv	0.8
CFt	0.4
CFm	0.9
Ksatdesign (cm/s)	
Ksatdesign (in/hr)	

$$\log_{10}(K_{sat}) = -1.57 + 1.90D_{10} + 0.015D_{60} - 0.013D_{90} - 2.08f_{fines}$$

Total Correction Factor, $CF_T = CF_v \times CF_t \times CF_m$

K_{sat} design = K_{sat} initial X CF_T

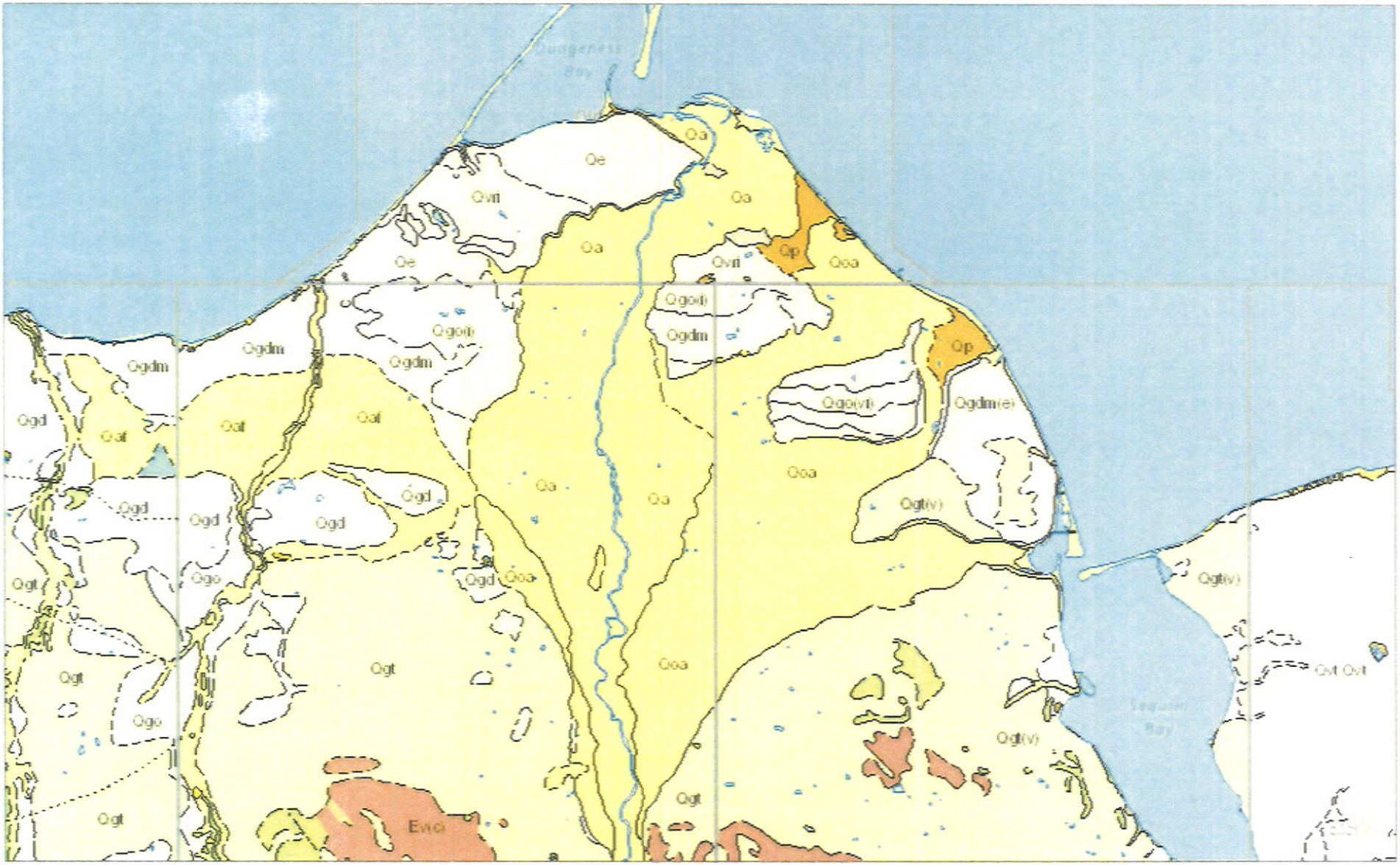
Table 3.3.1
Correction Factors to be Used With In-Situ Saturated Hydraulic Conductivity Measurements to Estimate Design Rates.

Issue	Partial Correction Factor
Site variability and number of locations tested	CF_v = 0.33 to 1.0
Test Method Large-scale PIT Small-scale PIT Other small-scale (e.g. Double ring, falling head) Grain Size Method	CF_t = 0.75 = 0.50 = 0.40 = 0.40
Degree of influent control to prevent siltation and bio-buildup	CF_m = 0.9

Appendix D

Geologic Maps and Seismic Information

My Map



Esri, NASA, NGA, USGS | WA State Parks GIS, Esri, HERE, Garmin, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA | Washington Division of Geology and Earth Resources

Home Subdivision - Phase B

Latitude, Longitude: 48.06547523, -123.12273163

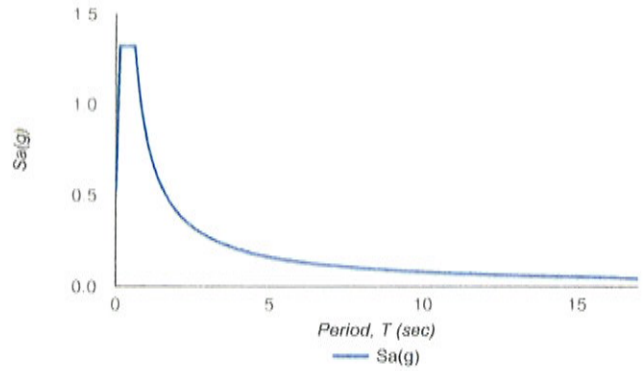


Date	8/2/2019, 11:32:02 AM
Design Code Reference Document	IBC-2015
Risk Category	II
Site Class	D - Stiff Soil

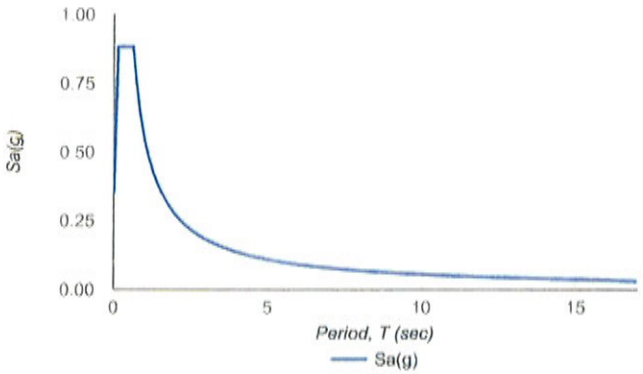
Type	Value	Description
S_S	1.323	MCE_R ground motion. (for 0.2 second period)
S_1	0.546	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.323	Site-modified spectral acceleration value
S_{M1}	0.819	Site-modified spectral acceleration value
S_{DS}	0.882	Numeric seismic design value at 0.2 second SA
S_{D1}	0.546	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.554	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.554	Site modified peak ground acceleration
T_L	16	Long-period transition period in seconds
SsRT	1.323	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.359	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.546	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.587	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.6	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.974	Mapped value of the risk coefficient at short periods
C_{R1}	0.931	Mapped value of the risk coefficient at a period of 1 s

MCER Response Spectrum



Design Response Spectrum



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Appendix E

NRCS Soil Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Clallam County Area, Washington



July 31, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:2,590 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clallam County Area, Washington
Survey Area Data: Version 16, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 29, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Carlsborg gravelly sandy loam, 0 to 5 percent slopes	0.0	0.0%
12	Clallam gravelly sandy loam, 0 to 15 percent slopes	10.7	32.4%
63	Sequim very gravelly sandy loam	9.0	27.3%
64	Sequim-McKenna-Mukilteo complex	13.3	40.3%
Totals for Area of Interest		**32.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Clallam County Area, Washington

6—Carlsborg gravelly sandy loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2gh7
Elevation: 50 to 500 feet
Mean annual precipitation: 20 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Carlsborg and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Carlsborg

Setting

Landform: Alluvial fans, terraces
Parent material: Alluvium

Typical profile

H1 - 0 to 9 inches: gravelly sandy loam
H2 - 9 to 20 inches: very gravelly loamy sand
H3 - 20 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Droughty Soils (G002XN402WA)
Hydric soil rating: No

12—Clallam gravelly sandy loam, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2gfc
Elevation: 40 to 1,800 feet
Mean annual precipitation: 23 inches

Mean annual air temperature: 48 degrees F
Frost-free period: 160 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Clallam and similar soils: 85 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Clallam

Setting
Landform: Hillslopes
Parent material: Till

Typical profile
H1 - 0 to 10 inches: gravelly ashy sandy loam
H2 - 10 to 28 inches: very gravelly ashy sandy loam
H3 - 28 to 60 inches: very gravelly sandy loam

Properties and qualities
Slope: 0 to 15 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups
Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: C
Forage suitability group: Limited Depth Soils (G002XN302WA)
Hydric soil rating: No

Minor Components

Mckenna
Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

63—Sequim very gravelly sandy loam

Map Unit Setting
National map unit symbol: 2ghc
Elevation: 20 to 300 feet
Mean annual precipitation: 18 inches

Mean annual air temperature: 48 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Sequim and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sequim

Setting

Landform: Terraces, alluvial fans
Parent material: Alluvium

Typical profile

H1 - 0 to 10 inches: very gravelly sandy loam
H2 - 10 to 23 inches: extremely cobbly loamy sand
H3 - 23 to 60 inches: extremely cobbly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Droughty Soils (G002XN402WA)
Hydric soil rating: No

64—Sequim-McKenna-Mukilteo complex

Map Unit Setting

National map unit symbol: 2ghd
Elevation: 100 to 300 feet
Mean annual precipitation: 18 to 70 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 250 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Sequim and similar soils: 35 percent
Mckenna and similar soils: 35 percent
Mukilteo and similar soils: 20 percent
Minor components: 3 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sequim

Setting

Landform: Terraces, alluvial fans
Parent material: Alluvium

Typical profile

H1 - 0 to 10 inches: very gravelly sandy loam
H2 - 10 to 23 inches: extremely cobbly loamy sand
H3 - 23 to 60 inches: extremely cobbly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Droughty Soils (G002XN402WA)
Hydric soil rating: No

Description of Mckenna

Setting

Landform: Terraces, depressions
Parent material: Glacial drift

Typical profile

H1 - 0 to 8 inches: gravelly ashy silt loam
H2 - 8 to 18 inches: gravelly loam
H3 - 18 to 24 inches: very gravelly loam
H4 - 24 to 32 inches: very gravelly sandy loam
H5 - 32 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: D
Forage suitability group: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

Description of Mukilteo

Setting

Landform: Terraces, depressions
Parent material: Mixed organic material

Typical profile

H1 - 0 to 10 inches: muck
H2 - 10 to 60 inches: mucky peat

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

Minor Components

Bellingham

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

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Exhibit 13

PRELIMINARY STORMWATER CONTROL PLAN

FOR

HOME SUBDIVISION – PHASE B

Date: June 1, 2021

Project: Phase B – of the Home Subdivision at the end of Comfort way and Rolling Hills way south of Silberhorn Road, Sequim

Prepared by: Zenovic & Associates, Inc.
301 East 6th Street, #1
Port Angeles, WA 98362



INTRODUCTION

B

This Preliminary Stormwater Control Plan has been prepared as part of the City of Sequim's (City) stormwater requirements for application for Major Subdivision approval. The intent of this report is to describe the stormwater management system for Phase of the Home Subdivision and to demonstrate compliance with the *2012 Stormwater Management Manual for Western Washington (amended 2014)* as adopted by the City of Sequim (SMC 13.104.100). Phases B includes installing asphalt roadway, sidewalk, storm, water, sewer and power utilities for a total of 33 lots. This report will address each of the minimum requirements in the *Manual* and provide information on existing conditions of the site, proposed construction, method of stormwater runoff analysis, and stormwater detention and treatment design.

This report is primarily intended to address the stormwater from areas within the right-of-way. Runoff from residences will be controlled through the use of infiltration trenches installed on each lot during the construction of each residence.

The report will address all nine minimum requirements and will include the Preliminary Stormwater Site Plan in Appendix A.

EXISTING CONDITIONS

This project will be located on Parcel 03-30-30-59-0000 which encompass 9.14 acres. The majority of the site has been previously cleared and is unused. Access onto the site is from Rolling Hills Way or Comfort Way off of Silberhorn Road. The site slopes downhill from south to north at an average grade of 3.0 percent.

A steep slope is located on the adjacent property along the southeast property line. This slope varies in height from 30 to 50 feet in height and has an average grade of 50%. The slope appears to be stable and is further addressed in the geotechnical report prepared for this project. A stormwater catchment system consisting of catch basins and 24" diameter storm pipe was installed along the southeast border of the site. This system captures surficial runoff from offsite and conveys it to the northwest where it discharges to an open ditch located between Phase A of the Home Subdivision and the adjacent Heckman Subdivision to the east. This system also conveys a significant portion of runoff from a drainage/irrigation ditch south of the project site.

Ownership/maintenance of this system is not addressed

There were no defined drainage channels observed onsite. There were some drainage channels noted on the bank southeast of the project site, but they are no longer defined by the time the runoff reaches the bottom of the slope.

Based on the NRCS soil survey, the site is located in an area with Sequim very gravelly sandy loam and a Sequim-Mckenna-Mukilteo complex soils.

A typical profile for Sequim very gravelly sandy loam consists of 0-10 inches of gravelly sandy loam, 10-23 inches of extremely cobbly loamy sand, and 23-60 inches of extremely cobbly sand. The soils are classified as a group A hydrologic soils (soils having a high infiltration rate (low runoff potential) when thoroughly wet. These soils consist mainly of deep, well drained to excessively drained sands or gravelly sands, and have a high rate of water transmission). Onsite test pits completed by this office confirmed the onsite soil types were consistent with the soils survey data with overlying depths of topsoil varying from 6 to 24 inches and no restrictive layer or water table found.

Does this differ from original soils report and from the one on Jara Way?

The Sequim-Mckenna-Mukilteo soils consist of a mixture of soil types. The Sequim soil portion is as described above. The Mckenna and Mukilteo portions are more poorly drained finer materials with limited depths to groundwater or restrictive layer.

Initial onsite investigations performed by this office consisted of excavating 10 test pits throughout the subject parcel. Samples were taken from various test pits for infiltration rate correlation through sieve analysis. Soils observed onsite were generally consistent with the soil types noted in the NRCS Soils Report. The majority of the onsite soils were consistent with the Sequim very gravelly sandy loam with some finer materials (Mckenna & Mukilteo) observed at shallow depths in test pits excavated in the southwestern portion of the site.

An additional 4 test pits were excavated on February 7th, 2020 directly following a major storm event during which the localized flooding was observed in the subdivisions north of the project. The water level in the pits was observed to be approximately 48" below ground surface at time of inspection. Additionally some standing water/flooding between 8" and 12" was observed in the south corner of the site. The flooding appeared to be primarily due to a significant amount of offsite runoff entering the site through the drainage ditch to the south of the project site. This flooding can be mitigated by improvements to inlet structure to the stormwater pipe noted above.

Improvements to the structure that is owned by who? South portion of site experienced flooding, so should slap on grade raised foundations be suggested, or a no-build zone?

MINIMUM REQUIREMENTS

The following section will describe how the project will conform to the nine minimum requirements of the Manual.

Minimum Requirement #1 - Preparation of Stormwater Site Plans

Preliminary Stormwater site plans have been prepared and submitted with the Application for Major Subdivision to the City of Sequim. Permanent Stormwater Site Plans will be submitted to the City of Sequim for approval during the Site Construction Permit application process.

Do they mean Final vs Preliminary or Construction vs Permanent?

Minimum Requirement #2 Construction Stormwater Pollution Prevention (SWPPP)

An erosion and sedimentation control plan and stormwater pollution prevention plan will be produced for each phase of the project and will be submitted to the City for approval during the Site Construction Permit process. These plans will include but are not limited to the following Best Management Practices:

1. Marking clearing limits to preserve the existing vegetation and limit land-disturbing activity.
2. Installation of stabilized construction entrances/exits to prevent sediment track-out.
3. Utilizing the temporary settling/infiltration ponds to control flow rates and prevent sediment from leaving the site.
4. Installation of silt fencing to protect adjacent properties from sediment.
5. Installation of inlet protection to protect new and existing drainage structures and systems from sediment.
6. Limitations on the time soils may remain exposed and unworked and requirements for soils stabilization.

As this project will disturb greater than one acre of land, this project is required to obtain coverage under the Construction Stormwater General Permit (CSGP) through the Department of Ecology which will require monthly reporting of discharge to the Department of Ecology and weekly inspections and oversight by a Certified Erosion and Sedimentation Control Lead. Changes will be made to the site and plan as needed to comply with the conditions of the CSGP. This permit will be obtained prior to land-disturbing activity.

Minimum Requirement #3 - Source Control of Pollution

All known, available and reasonable source control BMPs are required for this project. Specific source control BMPs to be employed on this project are:

- Landscaping and Lawn/Vegetation Management
- Maintenance and Repair of Vehicles and Equipment
- Maintenance of Stormwater Drainage and Treatment Systems
- Maintenance of Urban Streets

Minimum Requirement #4 - Preservation of Natural Drainage Systems and Outfalls

There are no clear drainage paths from the site. The intent of this project is to infiltrate the majority of the stormwater onsite through the use of infiltration trenches on each lot and roadside bio-retention trenches adjacent to the proposed roadways.

The site does receive runoff from the drainage ditch to the south of the project noted above and is currently directed to the 24" storm drain main noted above. During high flow events, the inlet to that storm system has become overwhelmed and localized flooding at the south end of the site was observed. However no overland or channelized flow was observed leaving the south end of the site. The project will include improving/maintaining the inlet to the storm drain main to mitigate the observed flooding. This is consistent with the approved design of that storm drain system.

Additionally the site does receive runoff from area southeast of the site at the top of the steep slope. No overland or channelized flow was observed from that slope even during major rainfall events and it is assumed that the majority of that runoff is infiltrated into the subgrade once it reaches the bottom of the slope. To mitigate any possibility of the site being affected by that runoff, a channel will be graded at the bottom of the slope and will direct runoff to the existing catch basins located at the bottom of this slope.

Minimum Requirement #5 – On-site Stormwater Management

Minimum requirement #5 is intended to promote the use of low impact development BMPs to infiltrate, disperse, and retain stormwater onsite. The applicant has the choice to either meet the LID Performance Standard and implement BMP T5.13 for onsite soil quality and depth or install LID BMPs per List #2 for all listed surfaces.

This project will be designed to meet the LID Performance standard. To achieve that standard, roof runoff from all lots will be mitigated through the use of downspout infiltration systems, and road, driveway and sidewalk runoff will be directed to roadside bioretention swales for treatment and infiltration. Additionally onsite topsoil removed from roadway areas will be utilized in disturbed areas to meet the requirements of BMP T5.13.

Infiltration trenches for roof runoff shall be sized to provide a minimum of 20 lineal feet of trench per 1,000 square feet of roof are. The trench shall be a minimum of 2' wide x18" deep. The bottom of the trench shall be no deeper than 3' below ground surface. The infiltration trenches on lots 50-53 shall be provided with an overflow to the roadside bio-retention system. All roof areas (except for lots 50-53) were excluded from the stormwater modeling consistent with the guidance in the *Manual*.

This needs to be on the Final Plat

The bio-retention swales were sized in WWHM2012 to provide 100% infiltration of received runoff. Calculations are included in the appendices and described further below.

Minimum Requirement #6 - Runoff Treatment

Treatment of runoff will be achieved through bio-retention swales located adjacent to the roadway. Runoff from the driveways and roadways will be directed to the bio-retention swales through curb cuts at regular intervals in the roadside gutter. Due to the proposed longitudinal slope of the roadways, check dams will be installed at regular intervals in the swales to promote ponding and subsequent infiltration. The exact spacing of the check dams will be specified in the construction documents.

The bio-retention swales were sized to infiltrate 100% of the received runoff volume which exceeds the 91% required to meet the treatment requirements of the *Manual*.

Minimum Requirement #7 - Flow Control

The flow control performance standard per the 2012 Manual is to, "match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow." Additionally this project will meet the LID performance standard which requires the project to match pre-developed discharge durations from 50% of the 2-year peak flow to 8% of the 2-year peak flow.

The project will utilize infiltration trenches on each lot to infiltrate stormwater from the roof areas. Runoff from the driveways, sidewalks and roadways will be directed to bio-retention swales intended to detain and infiltrate 100% of the runoff. Approximately 1.15 acres of the site (undeveloped areas at the back of lots) will not be captured and was included in the model as uncontrolled area.

An infiltration rate of 5 in./hr. was utilized for stormwater modeling and was based on observation of the subsurface soils and correlation of infiltration rates from sieve analyses performed on samples throughout the site. This information is included in the geotechnical report prepared for the project.

Modeling of the site was completed in WWHM2012 and the site was able to meet both the standard flow control performance standard and the LID performance standard.

Minimum Requirement #8 - Wetlands Protection

No known wetlands will be affected by this project.

Minimum Requirement #9 - Operation and Maintenance

An Operation and Maintenance Manual will be produced for each phase of the project and will be submitted to the City for review during the Site Construction Permit application process.

APPENDIX A

STORMWATER SITE PLANS

CITY OF SEQUIM, MAJOR SUBDIVISION FOR:
HOME – PHASE B (PRE18-003)
IN SECTION 30, TOWNSHIP 30 NORTH,
RANGE 03 WEST, W.M.
CITY OF SEQUIM, CLALLAM COUNTY

PROJECT INFORMATION

APPLICANT/OWNER:	GREEN CROW INVESTMENTS, LLC P.O. BOX 2439 PORT ANGELES, WA 98362
PROPOSED PROJECT:	PHASE-2, A 38 LOT SUBDIVISION -OFF COMFORT WAY AND ROLLING HILLS WAY
ZONING:	S_R4-8
UTILITIES:	SANITARY SEWER, WATER - CITY OF SEQUIM POWER - CLALLAM COUNTY PUD #1 COMMUNICATIONS - CENTURY LINK, WAVE BROADBAND
PARCEL NO.:	03-30-30-59-0000
DATE OF PREPARATION:	JULY 2019

HORIZONTAL AND VERTICAL DATUM:
TBD

MAP LEGEND

- SEISMIC SOIL AREA
- LANDSLIDE HAZARD AREA (NOT INCLUDED IN COUNTY CRITICAL AREAS MAPPING)
- 500' OFFSET FROM PROJECT BOUNDARIES
- STREAM/DITCH/IRRIGATION CHANNELS
- PROJECT PROPERTY BOUNDARIES

MAPPING NOTES

PARCEL, STREAM AND SEISMIC SOIL MAPPING OBTAINED FROM CLALLAM COUNTY GIS MAPPING DATA.
WETLAND MAPPING OBTAINED FROM THE NATIONAL WETLAND INVENTORY COMPILED BY THE U.S. FISH AND WILDLIFE SERVICE.

THE CRITICAL AREAS SHOWN IN THIS PLAN ARE BASED ON GENERALIZED SOURCES ABOVE AND MAY NOT ACCURATELY REPRESENT THE ACTUAL TYPES AND EXTENTS OF THE CRITICAL AREAS IN THE SITE VICINITY. THIS MAP IS NOT INTENDED TO SUPERSEDE PRIOR OR SUBSEQUENT PROFESSIONAL STUDIES/SURVEYS OF THE ACTUAL CRITICAL AREAS LOCATED NEAR OR WITHIN THE PROJECT SITE.

VICINITY NOTES

THE TOPOGRAPHY TO THE NORTH, AND WEST OF THE SITE SLOPE DOWN TO THE NORTH AT SIMILAR GRADES TO THOSE ONSITE. A STEEP SLOPE IS LOCATED ON THE ADJACENT PROPERTY TO THE SOUTHEAST AND PARALLELS THE SOUTHEAST PROPERTY LINE. THIS SLOPE VARIES IN HEIGHT FROM APPROXIMATELY 30 TO 50 FEET AND SLOPES AT APPROXIMATE GRADES OF 50%. THE AREA LOCATED ABOVE THE STEEP SLOPE IS PRIMARILY LEVEL WITH A SLIGHT SLOPE TO THE NORTH.

THE ZONING OF THE ALL PARCELS WITHIN 500 FEET OF THE SUBJECT PARCEL ARE ZONED RESIDENTIAL (EITHER R4-8 IN THE CITY OF SEQUIM AND S(R-4) CLALLAM COUNTY)

SITE PLAN

Scale: 1" = 100'

0 100' 200' 300'

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

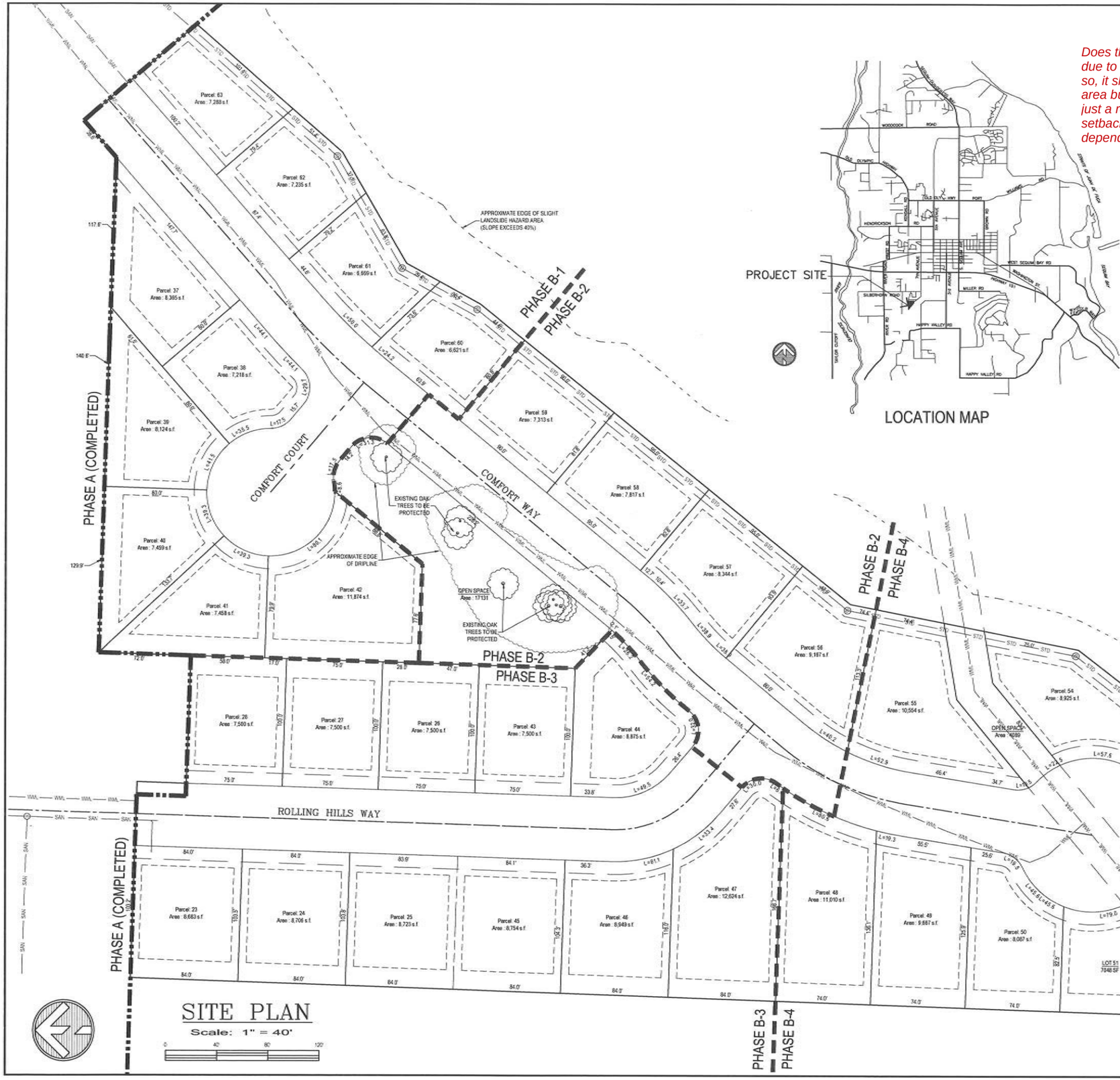
TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY SEQUIM, WA
VICINITY MAP

CLIENT: GREEN CROW INVESTMENTS CO, LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 100'
FILE: 18252-VM
JOB NO: 18252
DATE: June 1, 2021
SET: PRE-PLAT

SETH J. ROOMAN
STATE OF WASHINGTON
23779
REGISTERED
PROFESSIONAL ENGINEER

SHEET
C000



SITE PLAN

Scale: 1" = 40'

LOCATION MAP

Does this vary from code due to the critical area, if so, it should be a critical area building setback s just a regular building setback that can vary depending on the code

LEGEND:

- PROPERTY BOUNDARY
- BUILDING SETBACK
- EASEMENT BOUNDARY
- R.O.W. CENTERLINE

SITE LAND USAGE DATA

OVERALL	NUMBER OF RESIDENTIAL LOTS	33 LOTS
	GROSS ACREAGE	9.14 AC±
	RESIDENTIAL LOT AREA	6.45 AC±
	COMMON OPEN SPACE AREA	0.57 AC±
	RIGHTS-OF-WAY AREA	2.12 AC±
	GROSS DENSITY	3.61 UNITS/AC
	NET DENSITY	5.12 UNITS/AC
PHASE B-1	NUMBER OF RESIDENTIAL LOTS	10 LOTS
	GROSS ACREAGE	2.42 AC±
	RESIDENTIAL LOT ACREAGE	1.80 AC±
	GROSS DENSITY	4.13 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.56 UNITS/ACRE
PHASE B-2	NUMBER OF RESIDENTIAL LOTS	4 LOTS
	GROSS ACREAGE	1.68 AC±
	RESIDENTIAL LOT ACREAGE	0.75 AC±
	GROSS DENSITY	2.38 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.33 UNITS/ACRE
PHASE B-3	NUMBER OF RESIDENTIAL LOTS	11 LOTS
	GROSS ACREAGE	2.73 AC±
	RESIDENTIAL LOT ACREAGE	2.19 AC±
	GROSS DENSITY	4.03 UNITS/ACRE
	NET RESIDENTIAL DENSITY	5.02 UNITS/ACRE
PHASE B-4	NUMBER OF RESIDENTIAL LOTS	8 LOTS
	GROSS ACREAGE	2.30 AC±
	RESIDENTIAL LOT ACREAGE	1.72 AC±
	GROSS DENSITY	3.47 UNITS/ACRE
	NET RESIDENTIAL DENSITY	4.65 UNITS/ACRE
SETBACKS	FRONT YARD	15'
	REAR YARD	15'
	SIDE YARD	6'

How will improvements here actually affect the flooding observed at lots 50- 53?

ZENOVIC & ASSOCIATES
INCORPORATED
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PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (866) 417-0514
EMAIL: ZENOVIC@OLYMPUS.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY SEQUIM, WA

PRELIMINARY LOT LAYOUT

CLIENT:
GREEN CROW INVESTMENTS CO, LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 40'

FILE: 18252-P3

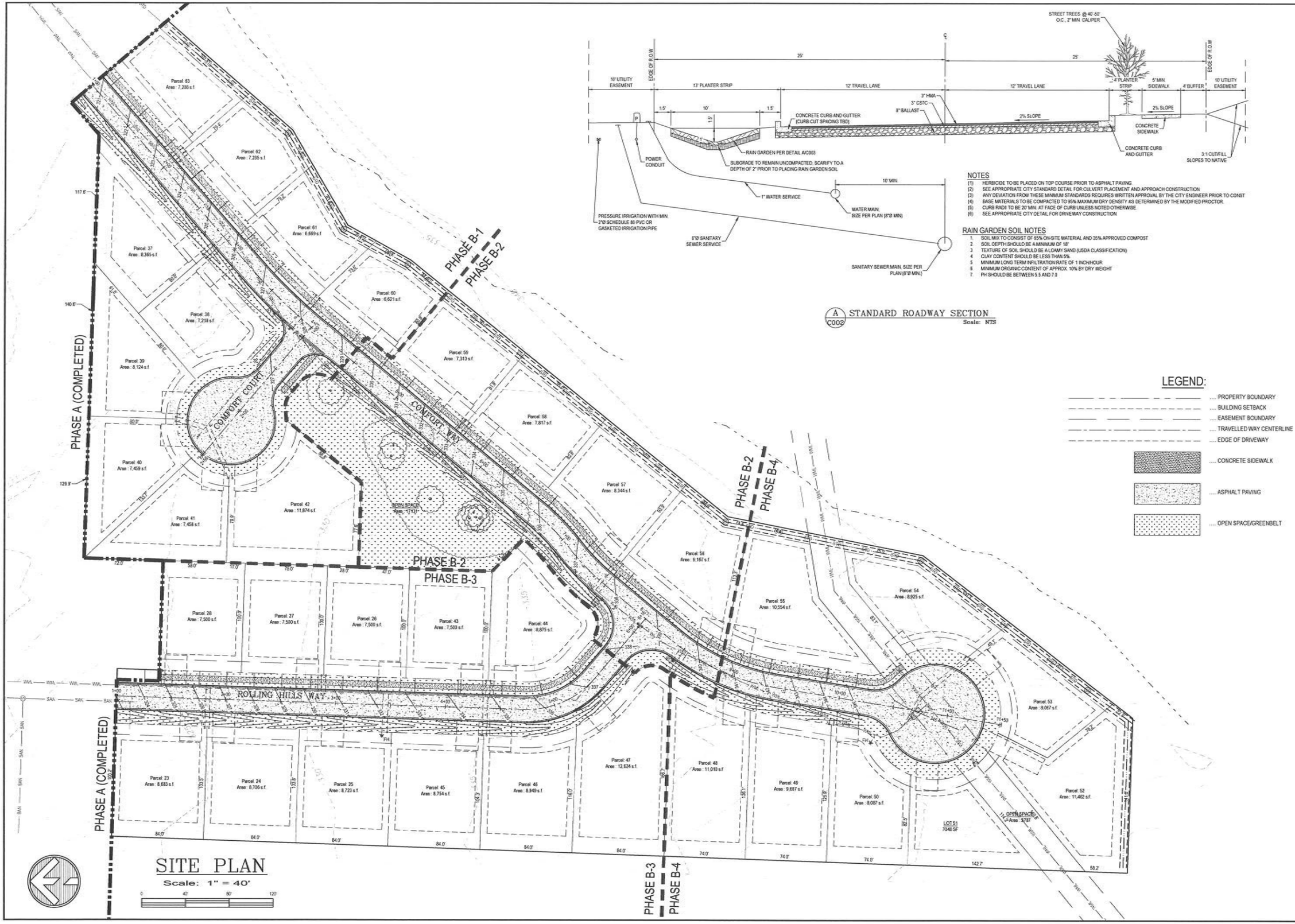
JOB NO: 18252

DATE: June 1, 2021

SET: PRE-PLAT

SETH J. ROOMIN — STATE OF WASHINGTON — 23777 — REGISTERED PROFESSIONAL ENGINEER

SHEET
C001



SITE PLAN
Scale: 1" = 40'

NOTES
(1) HERBICIDE TO BE PLACED ON TOP COURSE PRIOR TO ASPHALT PAVING
(2) SEE APPROPRIATE CITY STANDARD DETAIL FOR CULVERT PLACEMENT AND APPROACH CONSTRUCTION
(3) ANY DEVIATION FROM THESE MINIMUM STANDARDS REQUIRES WRITTEN APPROVAL BY THE CITY ENGINEER PRIOR TO CONST
(4) BASE MATERIALS TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR.
(5) CURB RADII TO BE 20' MIN. AT FACE OF CURB UNLESS NOTED OTHERWISE.
(6) SEE APPROPRIATE CITY DETAIL FOR DRIVEWAY CONSTRUCTION

RAIN GARDEN SOIL NOTES
1. SOIL MIX TO CONSIST OF 65% ON-SITE MATERIAL AND 35% APPROVED COMPOST
2 SOIL DEPTH SHOULD BE A MINIMUM OF 18"
3 TEXTURE OF SOIL SHOULD BE A LOAMY SAND (USDA CLASSIFICATION)
4 CLAY CONTENT SHOULD BE LESS THAN 5%
5 MINIMUM LONG TERM INFILTRATION RATE OF 1 INCH/HOUR
6 MINIMUM ORGANIC CONTENT OF APPROX. 10% BY DRY WEIGHT
7 PH SHOULD BE BETWEEN 5.5 AND 7.0

A C002 STANDARD ROADWAY SECTION
Scale: NTS

LEGEND:
..... PROPERTY BOUNDARY
..... BUILDING SETBACK
..... EASEMENT BOUNDARY
..... TRAVELLED WAY CENTERLINE
..... EDGE OF DRIVEWAY
..... CONCRETE SIDEWALK
..... ASPHALT PAVING
..... OPEN SPACE/GREENBELT

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-0501
FAX: (360) 417-0514
EMAIL: ZENOVIC@OLYMPIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: PHASE B - HOME SUBDIVISION AT COMFORT WAY AND ROLLING HILLS WAY SEQUIM, WA
PRELIMINARY CIRCULATION LAYOUT

CLIENT:
GREEN CROW INVESTMENTS CO, LLC
P.O. BOX 2439
PORT ANGELES, WA 98362

SCALE: 1" = 40'
FILE: 18252-P3
JOB NO: 18252
DATE: June 1, 2021
SET: PRE-PLAT

SETH J. ROMMEL
STATE OF WASHINGTON
53777
REGISTERED PROFESSIONAL ENGINEER

SHEET
C002

APPENDIX B

WWHM PROJECT REPORT

WWHM2012

PROJECT REPORT

General Model Information

Project Name:	Phase - B1
Site Name:	
Site Address:	
City:	
Report Date:	5/27/2021
Gage:	Port Angelis
Data Start:	1948/10/01
Data End:	2009/09/30
Timestep:	15 Minute
Precip Scale:	0.800
Version Date:	2018/10/10
Version:	4.2.16

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Forest, Flat	9.15
Pervious Total	9.15

Impervious Land Use	acre
Impervious Total	0
Basin Total	9.15

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.381
Pervious Total	0.381

Impervious Land Use	acre
ROADS FLAT	0.196
DRIVEWAYS FLAT	0.172
SIDEWALKS FLAT	0.04
Impervious Total	0.408
Basin Total	0.789

Element Flows To:

Surface	Interflow	Groundwater
Surface retention 1	Surface retention 1	

Basin 2

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.695
Pervious Total	0.695

Impervious Land Use	acre
ROADS FLAT	0.157
DRIVEWAYS FLAT	0.138
SIDEWALKS FLAT	0.007
Impervious Total	0.302
Basin Total	0.997

Element Flows To:

Surface	Interflow	Groundwater
Surface retention 2	Surface retention 2	

Basin 3

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.526
Pervious Total	0.526

Impervious Land Use	acre
ROADS FLAT	0.214
DRIVEWAYS FLAT	0.172
SIDEWALKS FLAT	0.047
Impervious Total	0.433
Basin Total	0.959

Element Flows To:

Surface	Interflow	Groundwater
Surface oretention 3	Surface oretention 3	

Basin 4

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	1.941
Pervious Total	1.941

Impervious Land Use	acre
ROADS FLAT	0.583
ROOF TOPS FLAT	0.248
DRIVEWAYS FLAT	0.654
SIDEWALKS FLAT	0.076
Impervious Total	1.561
Basin Total	3.502

Element Flows To:

Surface	Interflow	Groundwater
Surface retention 4	Surface retention 4	

Uncontrollled

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Pasture, Flat	1.154
Pervious Total	1.154
Impervious Land Use	acre
Impervious Total	0
Basin Total	1.154

Element Flows To:

Surface	Interflow	Groundwater
Flow Splitter 1	Flow Splitter 1	

Routing Elements
Predeveloped Routing

Mitigated Routing

Bioretention 1

Bottom Length:	200.00 ft.
Bottom Width:	1.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	SMMWW 12 in/hr
Material thickness of second layer:	0
Material type for second layer:	Sand
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	29.939
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	29.939
Percent Infiltrated:	100
Total Precip Applied to Facility:	1.281
Total Evap From Facility:	0.567
Underdrain not used	
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2
Flow Splitter 1	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0480	0.0000	0.0000	0.0000
0.0330	0.0475	0.0001	0.0000	0.0000
0.0659	0.0465	0.0002	0.0000	0.0000
0.0989	0.0455	0.0003	0.0000	0.0001
0.1319	0.0445	0.0004	0.0000	0.0002
0.1648	0.0435	0.0005	0.0000	0.0005
0.1978	0.0425	0.0007	0.0000	0.0009
0.2308	0.0416	0.0008	0.0000	0.0014
0.2637	0.0406	0.0010	0.0000	0.0022
0.2967	0.0396	0.0012	0.0000	0.0032
0.3297	0.0386	0.0014	0.0000	0.0046
0.3626	0.0376	0.0016	0.0000	0.0063
0.3956	0.0367	0.0018	0.0000	0.0085
0.4286	0.0357	0.0021	0.0000	0.0111
0.4615	0.0347	0.0023	0.0000	0.0144
0.4945	0.0337	0.0026	0.0000	0.0183
0.5275	0.0328	0.0029	0.0000	0.0230
0.5604	0.0318	0.0032	0.0000	0.0285
0.5934	0.0309	0.0035	0.0000	0.0350
0.6264	0.0299	0.0038	0.0000	0.0425
0.6593	0.0289	0.0042	0.0000	0.0512
0.6923	0.0280	0.0045	0.0000	0.0611
0.7253	0.0270	0.0049	0.0000	0.0724
0.7582	0.0261	0.0053	0.0000	0.0852
0.7912	0.0251	0.0057	0.0000	0.0997

0.8242	0.0242	0.0061	0.0000	0.1160
0.8571	0.0232	0.0065	0.0000	0.1342
0.8901	0.0223	0.0070	0.0000	0.1507
0.9231	0.0213	0.0074	0.0000	0.1555
0.9560	0.0204	0.0079	0.0000	0.1604
0.9890	0.0194	0.0084	0.0000	0.1653
1.0220	0.0185	0.0089	0.0000	0.1702
1.0549	0.0175	0.0094	0.0000	0.1750
1.0879	0.0166	0.0099	0.0000	0.1799
1.1209	0.0157	0.0105	0.0000	0.1848
1.1538	0.0147	0.0110	0.0000	0.1898
1.1868	0.0138	0.0116	0.0000	0.1947
1.2198	0.0129	0.0122	0.0000	0.1996
1.2527	0.0120	0.0128	0.0000	0.2045
1.2857	0.0110	0.0134	0.0000	0.2095
1.3187	0.0101	0.0141	0.0000	0.2145
1.3516	0.0092	0.0147	0.0000	0.2194
1.3846	0.0083	0.0154	0.0000	0.2244
1.4176	0.0073	0.0161	0.0000	0.2294
1.4505	0.0064	0.0167	0.0000	0.2344
1.4835	0.0055	0.0175	0.0000	0.2394
1.5000	0.0046	0.0178	0.0000	0.2419

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
1.5000	0.0480	0.0178	0.0000	0.0556	0.0050
1.5330	0.0490	0.0194	0.0000	0.0556	0.0100
1.5659	0.0500	0.0210	0.0000	0.0580	0.0151
1.5989	0.0510	0.0227	0.0000	0.0592	0.0201
1.6319	0.0520	0.0244	0.0000	0.0604	0.0252
1.6648	0.0530	0.0261	0.0000	0.0617	0.0302
1.6978	0.0540	0.0279	0.0000	0.0629	0.0353
1.7308	0.0550	0.0297	0.0000	0.0641	0.0404
1.7637	0.0560	0.0315	0.0000	0.0653	0.0455
1.7967	0.0570	0.0334	0.0000	0.0665	0.0506
1.8297	0.0580	0.0353	0.0000	0.0678	0.0557
1.8626	0.0590	0.0372	0.0000	0.0690	0.0608
1.8956	0.0600	0.0392	0.0000	0.0702	0.0659
1.9286	0.0611	0.0412	0.0000	0.0714	0.0711
1.9615	0.0621	0.0432	0.0000	0.0726	0.0762
1.9945	0.0631	0.0453	0.0000	0.0739	0.0814
2.0275	0.0641	0.0474	0.0000	0.0751	0.0865
2.0604	0.0651	0.0495	0.0000	0.0763	0.0917
2.0934	0.0662	0.0517	0.0000	0.0775	0.0969
2.1264	0.0672	0.0539	0.0000	0.0788	0.1021
2.1593	0.0682	0.0561	0.0000	0.0800	0.1073
2.1923	0.0693	0.0584	0.0000	0.0812	0.1125
2.2253	0.0703	0.0607	0.0000	0.0824	0.1177
2.2582	0.0713	0.0630	0.0000	0.0836	0.1229
2.2912	0.0724	0.0654	0.0000	0.0849	0.1282
2.3242	0.0734	0.0678	0.0000	0.0861	0.1334
2.3571	0.0744	0.0702	0.0000	0.0873	0.1387
2.3901	0.0755	0.0727	0.0000	0.0885	0.1439
2.4231	0.0765	0.0752	0.0000	0.0897	0.1492
2.4560	0.0776	0.0777	0.0000	0.0910	0.1545
2.4890	0.0786	0.0803	0.0000	0.0922	0.1598
2.5220	0.0797	0.0829	0.0346	0.0934	0.1651
2.5549	0.0807	0.0855	0.1365	0.0946	0.1704

2.5879	0.0818	0.0882	0.2754	0.0958	0.1757
2.6209	0.0828	0.0909	0.4414	0.0971	0.1810
2.6538	0.0839	0.0937	0.6273	0.0983	0.1864
2.6868	0.0849	0.0965	0.8261	0.0995	0.1917
2.7198	0.0860	0.0993	1.0308	0.1007	0.1971
2.7527	0.0871	0.1021	1.2343	0.1020	0.2024
2.7857	0.0881	0.1050	1.4294	0.1032	0.2078
2.8187	0.0892	0.1079	1.6096	0.1044	0.2132
2.8516	0.0903	0.1109	1.7695	0.1056	0.2186
2.8846	0.0913	0.1139	1.9054	0.1068	0.2240
2.9176	0.0924	0.1169	2.0158	0.1081	0.2294
2.9505	0.0935	0.1200	2.1028	0.1093	0.2348
2.9835	0.0945	0.1231	2.1721	0.1105	0.2375
3.0000	0.0951	0.1247	2.2635	0.1111	0.0000

Surface retention 1

Element Flows To:

Outlet 1	Outlet 2
Flow Splitter 1	Bioretention 1

Bioretention 2

Bottom Length:	50.00 ft.
Bottom Width:	1.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	SMMWW 12 in/hr
Material thickness of second layer:	0
Material type for second layer:	Sand
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	22.089
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	22.089
Percent Infiltrated:	100
Total Precip Applied to Facility:	0.638
Total Evap From Facility:	0.194
Underdrain not used	
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2
Flow Splitter 1	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0135	0.0000	0.0000	0.0000
0.0330	0.0134	0.0000	0.0000	0.0000
0.0659	0.0131	0.0000	0.0000	0.0000
0.0989	0.0128	0.0001	0.0000	0.0000
0.1319	0.0125	0.0001	0.0001	0.0001
0.1648	0.0122	0.0001	0.0001	0.0001
0.1978	0.0118	0.0002	0.0002	0.0002
0.2308	0.0115	0.0002	0.0004	0.0004
0.2637	0.0112	0.0003	0.0006	0.0006
0.2967	0.0109	0.0003	0.0008	0.0008
0.3297	0.0106	0.0004	0.0012	0.0012
0.3626	0.0104	0.0004	0.0016	0.0016
0.3956	0.0101	0.0005	0.0022	0.0022
0.4286	0.0098	0.0005	0.0029	0.0029
0.4615	0.0095	0.0006	0.0037	0.0037
0.4945	0.0092	0.0007	0.0048	0.0048
0.5275	0.0089	0.0007	0.0060	0.0060
0.5604	0.0086	0.0008	0.0075	0.0075
0.5934	0.0083	0.0009	0.0092	0.0092
0.6264	0.0081	0.0010	0.0112	0.0112
0.6593	0.0078	0.0011	0.0135	0.0135
0.6923	0.0075	0.0012	0.0162	0.0162
0.7253	0.0072	0.0013	0.0193	0.0193
0.7582	0.0069	0.0014	0.0227	0.0227
0.7912	0.0067	0.0015	0.0267	0.0267
0.8242	0.0064	0.0016	0.0311	0.0311
0.8571	0.0061	0.0017	0.0361	0.0361

0.8901	0.0059	0.0018	0.0406	0.0406
0.9231	0.0056	0.0020	0.0420	0.0420
0.9560	0.0053	0.0021	0.0435	0.0435
0.9890	0.0051	0.0022	0.0449	0.0449
1.0220	0.0048	0.0023	0.0463	0.0463
1.0549	0.0046	0.0025	0.0478	0.0478
1.0879	0.0043	0.0026	0.0492	0.0492
1.1209	0.0041	0.0028	0.0507	0.0507
1.1538	0.0038	0.0029	0.0522	0.0522
1.1868	0.0036	0.0031	0.0537	0.0537
1.2198	0.0033	0.0033	0.0552	0.0552
1.2527	0.0031	0.0034	0.0567	0.0567
1.2857	0.0028	0.0036	0.0582	0.0582
1.3187	0.0026	0.0038	0.0597	0.0597
1.3516	0.0023	0.0040	0.0613	0.0613
1.3846	0.0021	0.0041	0.0628	0.0628
1.4176	0.0019	0.0043	0.0644	0.0644
1.4505	0.0016	0.0045	0.0659	0.0659
1.4835	0.0014	0.0047	0.0675	0.0675
1.5000	0.0011	0.0048	0.0683	0.0683

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
1.5000	0.013545	0.004827	0.0000	0.0139	0.0016
1.5330	0.013859	0.005278	0.0000	0.0139	0.0032
1.5659	0.014175	0.005740	0.0000	0.0145	0.0048
1.5989	0.014493	0.006213	0.0000	0.0148	0.0064
1.6319	0.014812	0.006696	0.0000	0.0151	0.0080
1.6648	0.015134	0.007190	0.0000	0.0154	0.0096
1.6978	0.015457	0.007694	0.0000	0.0157	0.0113
1.7308	0.015782	0.008209	0.0000	0.0160	0.0129
1.7637	0.016109	0.008734	0.0000	0.0163	0.0146
1.7967	0.016437	0.009271	0.0000	0.0166	0.0162
1.8297	0.016768	0.009818	0.0000	0.0169	0.0179
1.8626	0.017100	0.010377	0.0000	0.0172	0.0196
1.8956	0.017434	0.010946	0.0000	0.0176	0.0213
1.9286	0.017770	0.011526	0.0000	0.0179	0.0230
1.9615	0.018107	0.012117	0.0000	0.0182	0.0247
1.9945	0.018446	0.012720	0.0000	0.0185	0.0264
2.0275	0.018788	0.013334	0.0000	0.0188	0.0282
2.0604	0.019131	0.013959	0.0000	0.0191	0.0299
2.0934	0.019475	0.014595	0.0000	0.0194	0.0316
2.1264	0.019822	0.015243	0.0000	0.0197	0.0334
2.1593	0.020170	0.015902	0.0000	0.0200	0.0352
2.1923	0.020520	0.016573	0.0000	0.0203	0.0369
2.2253	0.020872	0.017255	0.0000	0.0206	0.0387
2.2582	0.021226	0.017949	0.0000	0.0209	0.0405
2.2912	0.021582	0.018655	0.0000	0.0212	0.0423
2.3242	0.021939	0.019372	0.0000	0.0215	0.0441
2.3571	0.022298	0.020101	0.0000	0.0218	0.0460
2.3901	0.022659	0.020842	0.0000	0.0221	0.0478
2.4231	0.023022	0.021595	0.0000	0.0224	0.0496
2.4560	0.023386	0.022360	0.0000	0.0227	0.0515
2.4890	0.023753	0.023137	0.0000	0.0230	0.0533
2.5220	0.024121	0.023926	0.0000	0.0234	0.0552
2.5549	0.024491	0.024728	0.0000	0.0237	0.0571
2.5879	0.024862	0.025541	0.0000	0.0240	0.0589
2.6209	0.025236	0.026367	0.0000	0.0243	0.0608

2.6538	0.025611	0.027205	0.0000	0.0246	0.0627
2.6868	0.025988	0.028056	0.0000	0.0249	0.0646
2.7198	0.026367	0.028919	0.0000	0.0252	0.0666
2.7527	0.026748	0.029794	0.0000	0.0255	0.0685
2.7857	0.027130	0.030682	0.0000	0.0258	0.0704
2.8187	0.027515	0.031583	0.0000	0.0261	0.0724
2.8516	0.027901	0.032496	0.0000	0.0264	0.0743
2.8846	0.028289	0.033423	0.0000	0.0267	0.0763
2.9176	0.028678	0.034362	0.0000	0.0270	0.0783
2.9505	0.029070	0.035313	0.0000	0.0273	0.0803
2.9835	0.029463	0.036278	0.0000	0.0276	0.0813
3.0000	0.029660	0.036766	0.0000	0.0278	0.0000

Surface retention 2

Element Flows To:

Outlet 1	Outlet 2
Flow Splitter 1	Bioretention 2

Bioretention 3

Bottom Length: 309.00 ft.
Bottom Width: 1.00 ft.
Material thickness of first layer: 1.5
Material type for first layer: SMMWW 12 in/hr
Material thickness of second layer: 0
Material type for second layer: Sand
Material thickness of third layer: 0
Material type for third layer: GRAVEL
Infiltration On
Infiltration rate: 5
Infiltration safety factor: 1
Wetted surface area On
Total Volume Infiltrated (ac-ft.): 31.754
Total Volume Through Riser (ac-ft.): 0
Total Volume Through Facility (ac-ft.): 31.754
Percent Infiltrated: 100
Total Precip Applied to Facility: 1.49
Total Evap From Facility: 0.752
Underdrain not used
Discharge Structure
Riser Height: 1 ft.
Riser Diameter: 12 in.
Element Flows To:
Outlet 1 Outlet 2
Flow Splitter 1

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0730	0.0000	0.0000	0.0000
0.0330	0.0723	0.0001	0.0000	0.0000
0.0659	0.0708	0.0003	0.0000	0.0001
0.0989	0.0693	0.0004	0.0000	0.0002
0.1319	0.0678	0.0006	0.0000	0.0004
0.1648	0.0663	0.0008	0.0000	0.0008
0.1978	0.0648	0.0010	0.0000	0.0013
0.2308	0.0634	0.0013	0.0000	0.0022
0.2637	0.0619	0.0015	0.0000	0.0034
0.2967	0.0604	0.0018	0.0000	0.0049
0.3297	0.0589	0.0021	0.0000	0.0070
0.3626	0.0575	0.0025	0.0000	0.0097
0.3956	0.0560	0.0028	0.0000	0.0130
0.4286	0.0545	0.0032	0.0000	0.0171
0.4615	0.0531	0.0036	0.0000	0.0221
0.4945	0.0516	0.0040	0.0000	0.0282
0.5275	0.0501	0.0044	0.0000	0.0354
0.5604	0.0487	0.0049	0.0000	0.0438
0.5934	0.0472	0.0054	0.0000	0.0537
0.6264	0.0458	0.0059	0.0000	0.0652
0.6593	0.0443	0.0064	0.0000	0.0785
0.6923	0.0428	0.0070	0.0000	0.0937
0.7253	0.0414	0.0075	0.0000	0.1110
0.7582	0.0399	0.0081	0.0000	0.1307
0.7912	0.0385	0.0087	0.0000	0.1528
0.8242	0.0371	0.0094	0.0000	0.1777
0.8571	0.0356	0.0100	0.0000	0.2055

0.8901	0.0342	0.0107	0.0000	0.2307
0.9231	0.0327	0.0114	0.0000	0.2380
0.9560	0.0313	0.0121	0.0000	0.2454
0.9890	0.0298	0.0129	0.0000	0.2528
1.0220	0.0284	0.0136	0.0000	0.2601
1.0549	0.0270	0.0144	0.0000	0.2675
1.0879	0.0255	0.0152	0.0000	0.2749
1.1209	0.0241	0.0161	0.0000	0.2823
1.1538	0.0227	0.0169	0.0000	0.2897
1.1868	0.0213	0.0178	0.0000	0.2971
1.2198	0.0198	0.0187	0.0000	0.3046
1.2527	0.0184	0.0196	0.0000	0.3120
1.2857	0.0170	0.0206	0.0000	0.3194
1.3187	0.0156	0.0215	0.0000	0.3269
1.3516	0.0142	0.0225	0.0000	0.3344
1.3846	0.0127	0.0235	0.0000	0.3418
1.4176	0.0113	0.0246	0.0000	0.3493
1.4505	0.0099	0.0256	0.0000	0.3568
1.4835	0.0085	0.0267	0.0000	0.3643
1.5000	0.0071	0.0273	0.0000	0.3681

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
1.5000	0.0730	0.0273	0.0000	0.0858	0.0075
1.5330	0.0745	0.0297	0.0000	0.0858	0.0150
1.5659	0.0760	0.0322	0.0000	0.0896	0.0226
1.5989	0.0775	0.0347	0.0000	0.0915	0.0301
1.6319	0.0790	0.0373	0.0000	0.0934	0.0377
1.6648	0.0805	0.0399	0.0000	0.0953	0.0452
1.6978	0.0820	0.0426	0.0000	0.0972	0.0528
1.7308	0.0835	0.0453	0.0000	0.0990	0.0604
1.7637	0.0850	0.0481	0.0000	0.1009	0.0679
1.7967	0.0865	0.0509	0.0000	0.1028	0.0755
1.8297	0.0880	0.0538	0.0000	0.1047	0.0831
1.8626	0.0895	0.0567	0.0000	0.1066	0.0908
1.8956	0.0910	0.0597	0.0000	0.1085	0.0984
1.9286	0.0925	0.0627	0.0000	0.1104	0.1060
1.9615	0.0940	0.0658	0.0000	0.1122	0.1137
1.9945	0.0955	0.0689	0.0000	0.1141	0.1213
2.0275	0.0971	0.0721	0.0000	0.1160	0.1290
2.0604	0.0986	0.0753	0.0000	0.1179	0.1366
2.0934	0.1001	0.0786	0.0000	0.1198	0.1443
2.1264	0.1016	0.0819	0.0000	0.1217	0.1520
2.1593	0.1032	0.0853	0.0000	0.1236	0.1597
2.1923	0.1047	0.0887	0.0000	0.1254	0.1674
2.2253	0.1062	0.0922	0.0000	0.1273	0.1751
2.2582	0.1077	0.0957	0.0000	0.1292	0.1828
2.2912	0.1093	0.0993	0.0000	0.1311	0.1906
2.3242	0.1108	0.1029	0.0000	0.1330	0.1983
2.3571	0.1123	0.1066	0.0000	0.1349	0.2060
2.3901	0.1139	0.1103	0.0000	0.1368	0.2138
2.4231	0.1154	0.1141	0.0000	0.1387	0.2216
2.4560	0.1170	0.1179	0.0000	0.1405	0.2294
2.4890	0.1185	0.1218	0.0000	0.1424	0.2371
2.5220	0.1200	0.1258	0.0346	0.1443	0.2449
2.5549	0.1216	0.1297	0.1365	0.1462	0.2527
2.5879	0.1231	0.1338	0.2754	0.1481	0.2605
2.6209	0.1247	0.1379	0.4414	0.1500	0.2684

2.6538	0.1262	0.1420	0.6273	0.1519	0.2762
2.6868	0.1278	0.1462	0.8261	0.1537	0.2840
2.7198	0.1293	0.1504	1.0308	0.1556	0.2919
2.7527	0.1309	0.1547	1.2343	0.1575	0.2997
2.7857	0.1325	0.1590	1.4294	0.1594	0.3076
2.8187	0.1340	0.1634	1.6096	0.1613	0.3155
2.8516	0.1356	0.1679	1.7695	0.1632	0.3234
2.8846	0.1371	0.1724	1.9054	0.1651	0.3313
2.9176	0.1387	0.1769	2.0158	0.1670	0.3392
2.9505	0.1403	0.1815	2.1028	0.1688	0.3471
2.9835	0.1418	0.1862	2.1721	0.1707	0.3510
3.0000	0.1426	0.1885	2.2635	0.1717	0.0000

Surface oretention 3

Element Flows To:

Outlet 1	Outlet 2
Flow Splitter 1	Bioretention 3

Flow Splitter 1

Bottom Length: 10.00 ft.
Bottom Length: 10.00 ft.
Depth: 10 ft.
Side slope 1: 0 To 1
Side slope 2: 0 To 1
Side slope 3: 0 To 1
Side slope 4: 0 To 1
Control Structure Splitter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Primary(cfs)	Secondary(cfs)
0.000	0.002	0.000	0.000	0.000
0.111	0.002	0.000	0.578	0.000
0.222	0.002	0.000	0.818	0.000
0.333	0.002	0.000	1.002	0.000
0.444	0.002	0.001	1.157	0.000
0.555	0.002	0.001	1.294	0.000
0.666	0.002	0.001	1.418	0.000
0.777	0.002	0.001	1.531	0.000
0.888	0.002	0.002	1.637	0.000
1.000	0.002	0.002	1.736	0.000
1.111	0.002	0.002	1.830	0.000
1.222	0.002	0.002	1.920	0.000
1.333	0.002	0.003	2.005	0.000
1.444	0.002	0.003	2.087	0.000
1.555	0.002	0.003	2.166	0.000
1.666	0.002	0.003	2.242	0.000
1.777	0.002	0.004	2.315	0.000
1.888	0.002	0.004	2.386	0.000
2.000	0.002	0.004	2.456	0.000
2.111	0.002	0.004	2.523	0.000
2.222	0.002	0.005	2.589	0.000
2.333	0.002	0.005	2.652	0.000
2.444	0.002	0.005	2.715	0.000
2.555	0.002	0.005	2.776	0.000
2.666	0.002	0.006	2.836	0.000
2.777	0.002	0.006	2.894	0.000
2.888	0.002	0.006	2.951	0.000
3.000	0.002	0.006	3.008	0.000
3.111	0.002	0.007	3.063	0.000
3.222	0.002	0.007	3.117	0.000
3.333	0.002	0.007	3.170	0.000
3.444	0.002	0.007	3.223	0.000
3.555	0.002	0.008	3.274	0.000
3.666	0.002	0.008	3.325	0.000
3.777	0.002	0.008	3.375	0.000
3.888	0.002	0.008	3.424	0.000
4.000	0.002	0.009	3.473	0.000
4.111	0.002	0.009	3.521	0.000
4.222	0.002	0.009	3.568	0.000
4.333	0.002	0.009	3.615	0.000
4.444	0.002	0.010	3.661	0.000
4.555	0.002	0.010	3.706	0.000
4.666	0.002	0.010	3.751	0.000
4.777	0.002	0.011	3.796	0.000
4.888	0.002	0.011	3.840	0.000
5.000	0.002	0.011	3.883	0.000
5.111	0.002	0.011	5.104	0.000

5.222	0.002	0.012	7.294	0.000
5.333	0.002	0.012	10.08	0.000
5.444	0.002	0.012	13.31	0.000
5.555	0.002	0.012	16.81	0.000
5.666	0.002	0.013	20.44	0.000
5.777	0.002	0.013	24.03	0.000
5.888	0.002	0.013	27.42	0.000
6.000	0.002	0.013	30.49	0.000
6.111	0.002	0.014	33.12	0.000
6.222	0.002	0.014	35.26	0.000
6.333	0.002	0.014	36.92	0.000
6.444	0.002	0.014	38.20	0.000
6.555	0.002	0.015	39.80	0.000
6.666	0.002	0.015	41.08	0.000
6.777	0.002	0.015	42.31	0.000
6.888	0.002	0.015	43.51	0.000
7.000	0.002	0.016	44.68	0.000
7.111	0.002	0.016	45.81	0.000
7.222	0.002	0.016	46.92	0.000
7.333	0.002	0.016	48.00	0.000
7.444	0.002	0.017	49.05	0.000
7.555	0.002	0.017	50.08	0.000
7.666	0.002	0.017	51.09	0.000
7.777	0.002	0.017	52.08	0.000
7.888	0.002	0.018	53.05	0.000
8.000	0.002	0.018	54.01	0.000
8.111	0.002	0.018	54.94	0.000
8.222	0.002	0.018	55.86	0.000
8.333	0.002	0.019	56.76	0.000
8.444	0.002	0.019	57.65	0.000
8.555	0.002	0.019	58.53	0.000
8.666	0.002	0.019	59.39	0.000
8.777	0.002	0.020	60.24	0.000
8.888	0.002	0.020	61.07	0.000
9.000	0.002	0.020	61.90	0.000
9.111	0.002	0.020	62.71	0.000
9.222	0.002	0.021	63.52	0.000
9.333	0.002	0.021	64.31	0.000
9.444	0.002	0.021	65.09	0.000
9.555	0.002	0.021	65.87	0.000
9.666	0.002	0.022	66.63	0.000
9.777	0.002	0.022	67.39	0.000
9.888	0.002	0.022	68.13	0.000
10.00	0.002	0.023	68.87	0.000
10.11	0.002	0.023	69.60	0.000

Discharge Structure
Riser Height: 5 ft.
Riser Diameter: 36 in.
Orifice 1 Diameter: 8 in. Elevation:0 ft.
Element Flows To:
Outlet 1 Outlet 2

Bioretention 4

Bottom Length:	450.00 ft.
Bottom Width:	1.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	SMMWW 12 in/hr
Material thickness of second layer:	0
Material type for second layer:	Sand
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	114.26
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	114.26
Percent Infiltrated:	100
Total Precip Applied to Facility:	3.922
Total Evap From Facility:	1.483
Underdrain not used	
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2
Flow Splitter 1	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.1054	0.0000	0.0000	0.0000
0.0330	0.1043	0.0002	0.0000	0.0000
0.0659	0.1022	0.0004	0.0001	0.0001
0.0989	0.1001	0.0006	0.0002	0.0002
0.1319	0.0979	0.0009	0.0006	0.0006
0.1648	0.0958	0.0012	0.0011	0.0011
0.1978	0.0937	0.0015	0.0019	0.0019
0.2308	0.0916	0.0018	0.0032	0.0032
0.2637	0.0894	0.0022	0.0049	0.0049
0.2967	0.0873	0.0027	0.0072	0.0072
0.3297	0.0852	0.0031	0.0102	0.0102
0.3626	0.0831	0.0036	0.0141	0.0141
0.3956	0.0810	0.0041	0.0189	0.0189
0.4286	0.0789	0.0046	0.0249	0.0249
0.4615	0.0768	0.0052	0.0322	0.0322
0.4945	0.0747	0.0058	0.0409	0.0409
0.5275	0.0726	0.0065	0.0513	0.0513
0.5604	0.0705	0.0071	0.0636	0.0636
0.5934	0.0684	0.0078	0.0780	0.0780
0.6264	0.0663	0.0086	0.0947	0.0947
0.6593	0.0642	0.0093	0.1139	0.1139
0.6923	0.0621	0.0101	0.1359	0.1359
0.7253	0.0600	0.0109	0.1610	0.1610
0.7582	0.0579	0.0118	0.1894	0.1894
0.7912	0.0558	0.0127	0.2215	0.2215
0.8242	0.0537	0.0136	0.2575	0.2575
0.8571	0.0516	0.0146	0.2978	0.2978

0.8901	0.0496	0.0155	0.3342	0.3342
0.9231	0.0475	0.0166	0.3447	0.3447
0.9560	0.0454	0.0176	0.3553	0.3553
0.9890	0.0433	0.0187	0.3659	0.3659
1.0220	0.0413	0.0198	0.3765	0.3765
1.0549	0.0392	0.0209	0.3871	0.3871
1.0879	0.0371	0.0221	0.3977	0.3977
1.1209	0.0350	0.0233	0.4084	0.4084
1.1538	0.0330	0.0246	0.4190	0.4190
1.1868	0.0309	0.0258	0.4297	0.4297
1.2198	0.0288	0.0271	0.4403	0.4403
1.2527	0.0268	0.0285	0.4510	0.4510
1.2857	0.0247	0.0298	0.4616	0.4616
1.3187	0.0227	0.0312	0.4723	0.4723
1.3516	0.0206	0.0326	0.4830	0.4830
1.3846	0.0185	0.0341	0.4937	0.4937
1.4176	0.0165	0.0356	0.5044	0.5044
1.4505	0.0144	0.0371	0.5152	0.5152
1.4835	0.0124	0.0387	0.5259	0.5259
1.5000	0.0103	0.0395	0.5313	0.5313

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
1.5000	0.1054	0.0395	0.0000	0.1250	0.0107
1.5330	0.1075	0.0430	0.0000	0.1250	0.0215
1.5659	0.1096	0.0466	0.0000	0.1305	0.0323
1.5989	0.1118	0.0502	0.0000	0.1332	0.0430
1.6319	0.1139	0.0539	0.0000	0.1360	0.0538
1.6648	0.1160	0.0577	0.0000	0.1387	0.0646
1.6978	0.1182	0.0616	0.0000	0.1415	0.0754
1.7308	0.1203	0.0655	0.0000	0.1442	0.0862
1.7637	0.1225	0.0695	0.0000	0.1470	0.0970
1.7967	0.1246	0.0736	0.0000	0.1497	0.1078
1.8297	0.1268	0.0777	0.0000	0.1525	0.1187
1.8626	0.1289	0.0819	0.0000	0.1552	0.1295
1.8956	0.1311	0.0862	0.0000	0.1580	0.1403
1.9286	0.1332	0.0906	0.0000	0.1607	0.1512
1.9615	0.1354	0.0950	0.0000	0.1635	0.1621
1.9945	0.1375	0.0995	0.0000	0.1662	0.1730
2.0275	0.1397	0.1041	0.0000	0.1690	0.1838
2.0604	0.1418	0.1087	0.0000	0.1717	0.1947
2.0934	0.1440	0.1134	0.0000	0.1745	0.2056
2.1264	0.1462	0.1182	0.0000	0.1772	0.2166
2.1593	0.1483	0.1231	0.0000	0.1799	0.2275
2.1923	0.1505	0.1280	0.0000	0.1827	0.2384
2.2253	0.1527	0.1330	0.0000	0.1854	0.2494
2.2582	0.1548	0.1381	0.0000	0.1882	0.2603
2.2912	0.1570	0.1432	0.0000	0.1909	0.2713
2.3242	0.1592	0.1484	0.0000	0.1937	0.2822
2.3571	0.1614	0.1537	0.0000	0.1964	0.2932
2.3901	0.1635	0.1590	0.0000	0.1992	0.3042
2.4231	0.1657	0.1645	0.0000	0.2019	0.3152
2.4560	0.1679	0.1700	0.0000	0.2047	0.3262
2.4890	0.1701	0.1755	0.0000	0.2074	0.3372
2.5220	0.1723	0.1812	0.0000	0.2102	0.3482
2.5549	0.1744	0.1869	0.0000	0.2129	0.3593
2.5879	0.1766	0.1927	0.0000	0.2157	0.3703
2.6209	0.1788	0.1985	0.0000	0.2184	0.3813

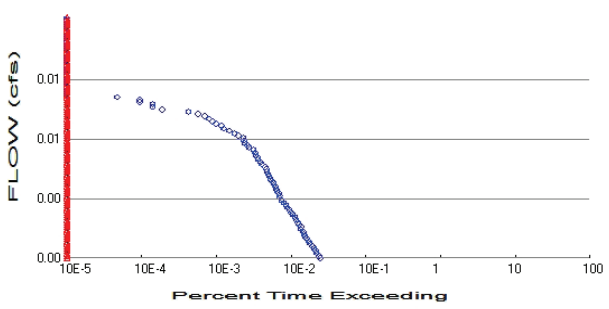
2.6538	0.1810	0.2045	0.0000	0.2212	0.3924
2.6868	0.1832	0.2105	0.0000	0.2239	0.4035
2.7198	0.1854	0.2166	0.0000	0.2266	0.4146
2.7527	0.1876	0.2227	0.0000	0.2294	0.4256
2.7857	0.1898	0.2289	0.0000	0.2321	0.4367
2.8187	0.1920	0.2352	0.0000	0.2349	0.4478
2.8516	0.1942	0.2416	0.0000	0.2376	0.4589
2.8846	0.1964	0.2480	0.0000	0.2404	0.4701
2.9176	0.1986	0.2545	0.0000	0.2431	0.4812
2.9505	0.2008	0.2611	0.0000	0.2459	0.4923
2.9835	0.2030	0.2678	0.0000	0.2486	0.4979
3.0000	0.2041	0.2711	0.0000	0.2500	0.0000

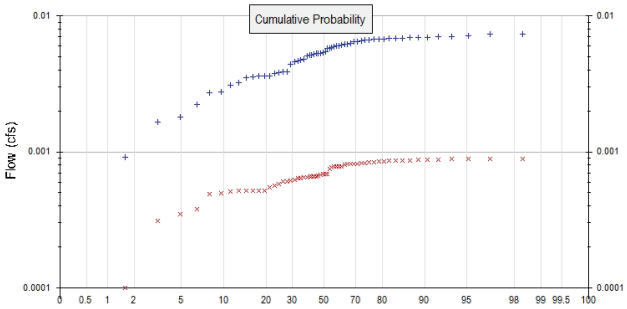
Surface retention 4

Element Flows To:

Outlet 1	Outlet 2
Flow Splitter 1	Bioretention 4

Analysis Results
POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 9.15
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 4.697
Total Impervious Area: 2.704

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.005103
5 year	0.007095
10 year	0.008099
25 year	0.009078
50 year	0.009644
100 year	0.0101

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0.000895
5 year	0.001063
10 year	0.001141
25 year	0.001216
50 year	0.001258
100 year	0.001293

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	**Predeveloped**	**Mitigated**
1949	0.007	0.001
1950	0.006	0.001
1951	0.006	0.001
1952	0.006	0.001
1953	0.007	0.000
1954	0.007	0.001
1955	0.007	0.001
1956	0.004	0.001
1957	0.005	0.001
1958	0.003	0.000

1959	0.005	0.001
1960	0.007	0.001
1961	0.007	0.001
1962	0.004	0.001
1963	0.005	0.001
1964	0.007	0.001
1965	0.007	0.001
1966	0.004	0.001
1967	0.005	0.001
1968	0.005	0.001
1969	0.005	0.001
1970	0.005	0.001
1971	0.005	0.001
1972	0.005	0.001
1973	0.004	0.001
1974	0.002	0.000
1975	0.005	0.001
1976	0.004	0.001
1977	0.003	0.001
1978	0.002	0.000
1979	0.004	0.001
1980	0.006	0.001
1981	0.007	0.001
1982	0.007	0.001
1983	0.006	0.001
1984	0.004	0.001
1985	0.007	0.001
1986	0.006	0.001
1987	0.005	0.001
1988	0.005	0.001
1989	0.005	0.001
1990	0.004	0.001
1991	0.006	0.001
1992	0.006	0.001
1993	0.003	0.001
1994	0.001	0.000
1995	0.003	0.001
1996	0.007	0.001
1997	0.006	0.001
1998	0.001	0.000
1999	0.007	0.001
2000	0.006	0.001
2001	0.002	0.000
2002	0.007	0.001
2003	0.006	0.001
2004	0.007	0.001
2005	0.007	0.001
2006	0.007	0.001
2007	0.007	0.001
2008	0.004	0.001
2009	0.004	0.001

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.0074	0.0009
2	0.0073	0.0009
3	0.0072	0.0009

4	0.0070	0.0009
5	0.0070	0.0009
6	0.0070	0.0009
7	0.0069	0.0009
8	0.0069	0.0009
9	0.0069	0.0009
10	0.0068	0.0009
11	0.0068	0.0009
12	0.0068	0.0008
13	0.0067	0.0008
14	0.0067	0.0008
15	0.0067	0.0008
16	0.0066	0.0008
17	0.0065	0.0008
18	0.0065	0.0008
19	0.0065	0.0008
20	0.0063	0.0008
21	0.0062	0.0008
22	0.0062	0.0008
23	0.0061	0.0008
24	0.0061	0.0008
25	0.0060	0.0008
26	0.0059	0.0008
27	0.0058	0.0008
28	0.0058	0.0008
29	0.0057	0.0007
30	0.0055	0.0007
31	0.0054	0.0007
32	0.0053	0.0007
33	0.0053	0.0007
34	0.0053	0.0007
35	0.0052	0.0007
36	0.0051	0.0007
37	0.0051	0.0007
38	0.0051	0.0007
39	0.0048	0.0006
40	0.0047	0.0006
41	0.0046	0.0006
42	0.0046	0.0006
43	0.0044	0.0006
44	0.0039	0.0006
45	0.0039	0.0006
46	0.0038	0.0006
47	0.0038	0.0006
48	0.0036	0.0005
49	0.0036	0.0005
50	0.0036	0.0005
51	0.0036	0.0005
52	0.0035	0.0005
53	0.0032	0.0005
54	0.0031	0.0005
55	0.0028	0.0005
56	0.0027	0.0005
57	0.0022	0.0004
58	0.0018	0.0003
59	0.0016	0.0003
60	0.0009	0.0000
61	0.0007	0.0000

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0026	521	0	0	Pass
0.0026	501	0	0	Pass
0.0027	473	0	0	Pass
0.0028	453	0	0	Pass
0.0028	431	0	0	Pass
0.0029	406	0	0	Pass
0.0030	383	0	0	Pass
0.0031	366	0	0	Pass
0.0031	348	0	0	Pass
0.0032	327	0	0	Pass
0.0033	318	0	0	Pass
0.0033	308	0	0	Pass
0.0034	293	0	0	Pass
0.0035	287	0	0	Pass
0.0036	272	0	0	Pass
0.0036	259	0	0	Pass
0.0037	248	0	0	Pass
0.0038	239	0	0	Pass
0.0038	225	0	0	Pass
0.0039	211	0	0	Pass
0.0040	202	0	0	Pass
0.0041	191	0	0	Pass
0.0041	182	0	0	Pass
0.0042	169	0	0	Pass
0.0043	158	0	0	Pass
0.0043	152	0	0	Pass
0.0044	149	0	0	Pass
0.0045	144	0	0	Pass
0.0046	138	0	0	Pass
0.0046	134	0	0	Pass
0.0047	132	0	0	Pass
0.0048	124	0	0	Pass
0.0048	118	0	0	Pass
0.0049	112	0	0	Pass
0.0050	109	0	0	Pass
0.0051	105	0	0	Pass
0.0051	101	0	0	Pass
0.0052	99	0	0	Pass
0.0053	97	0	0	Pass
0.0053	87	0	0	Pass
0.0054	84	0	0	Pass
0.0055	77	0	0	Pass
0.0056	75	0	0	Pass
0.0056	72	0	0	Pass
0.0057	70	0	0	Pass
0.0058	67	0	0	Pass
0.0058	58	0	0	Pass
0.0059	55	0	0	Pass
0.0060	51	0	0	Pass
0.0061	50	0	0	Pass
0.0061	49	0	0	Pass
0.0062	42	0	0	Pass
0.0063	37	0	0	Pass

0.0063	32	0	0	Pass
0.0064	27	0	0	Pass
0.0065	25	0	0	Pass
0.0066	21	0	0	Pass
0.0066	19	0	0	Pass
0.0067	17	0	0	Pass
0.0068	15	0	0	Pass
0.0068	12	0	0	Pass
0.0069	9	0	0	Pass
0.0070	4	0	0	Pass
0.0071	3	0	0	Pass
0.0071	3	0	0	Pass
0.0072	2	0	0	Pass
0.0073	2	0	0	Pass
0.0074	1	0	0	Pass
0.0074	0	0	0	Pass
0.0075	0	0	0	Pass
0.0076	0	0	0	Pass
0.0076	0	0	0	Pass
0.0077	0	0	0	Pass
0.0078	0	0	0	Pass
0.0079	0	0	0	Pass
0.0079	0	0	0	Pass
0.0080	0	0	0	Pass
0.0081	0	0	0	Pass
0.0081	0	0	0	Pass
0.0082	0	0	0	Pass
0.0083	0	0	0	Pass
0.0084	0	0	0	Pass
0.0084	0	0	0	Pass
0.0085	0	0	0	Pass
0.0086	0	0	0	Pass
0.0086	0	0	0	Pass
0.0087	0	0	0	Pass
0.0088	0	0	0	Pass
0.0089	0	0	0	Pass
0.0089	0	0	0	Pass
0.0090	0	0	0	Pass
0.0091	0	0	0	Pass
0.0091	0	0	0	Pass
0.0092	0	0	0	Pass
0.0093	0	0	0	Pass
0.0094	0	0	0	Pass
0.0094	0	0	0	Pass
0.0095	0	0	0	Pass
0.0096	0	0	0	Pass
0.0096	0	0	0	Pass

Water Quality

Water Quality BMP Flow and Volume for POC #1

On-line facility volume:	0 acre-feet
On-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.
Off-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Flow Splitter 1 POC	☐	0.01			☐	0.00			
retention 1	☐	27.24			☐	100.00			
retention 2	☐	20.10			☐	100.00			
oretention 3	☐	28.90			☐	100.00			
retention 4	☐	103.98			☐	100.00			
Total Volume Infiltrated		180.23	0.00	0.00		99.99	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Passed

Model Default Modifications

Total of 0 changes have been made.

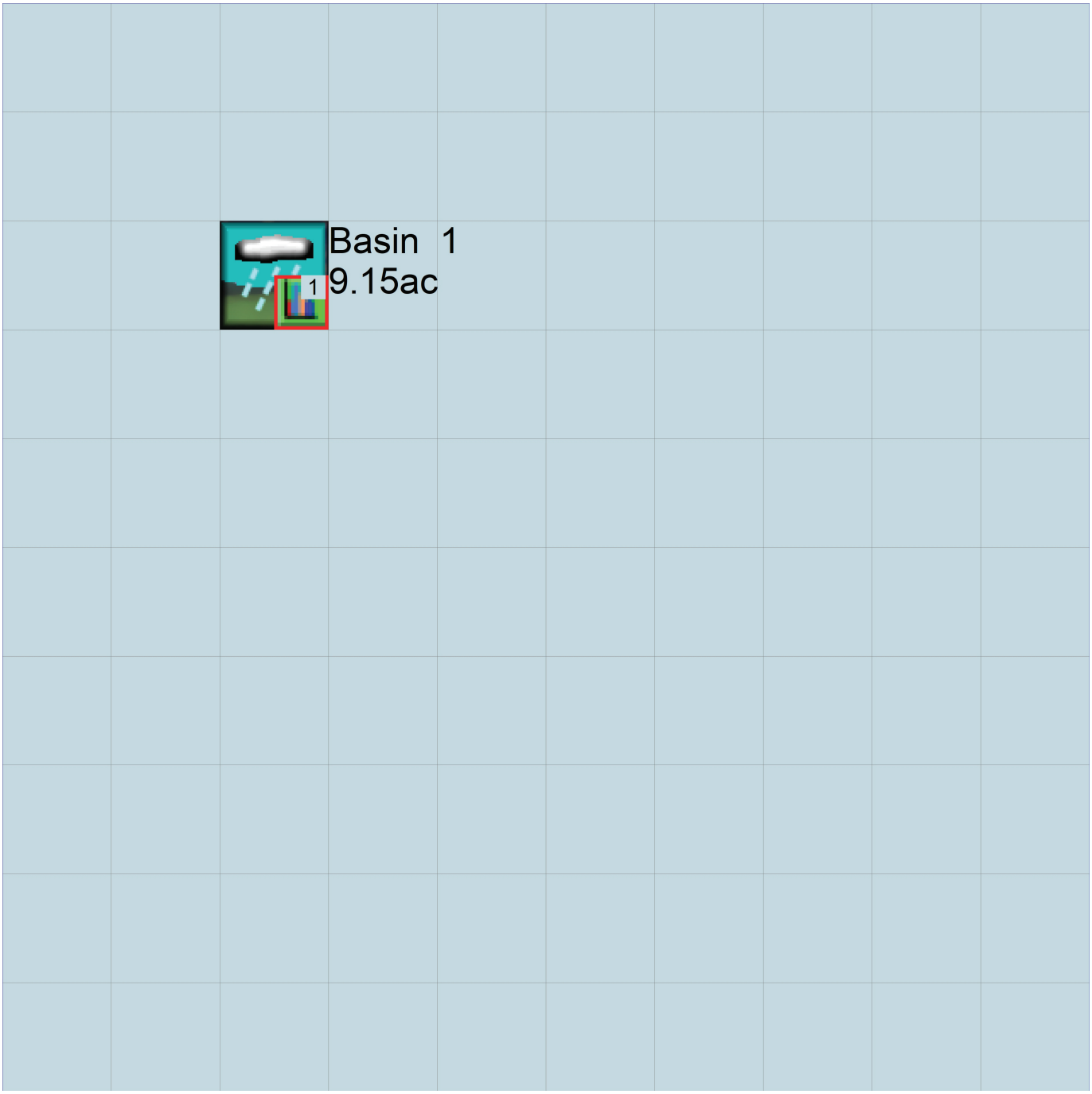
PERLND Changes

No PERLND changes have been made.

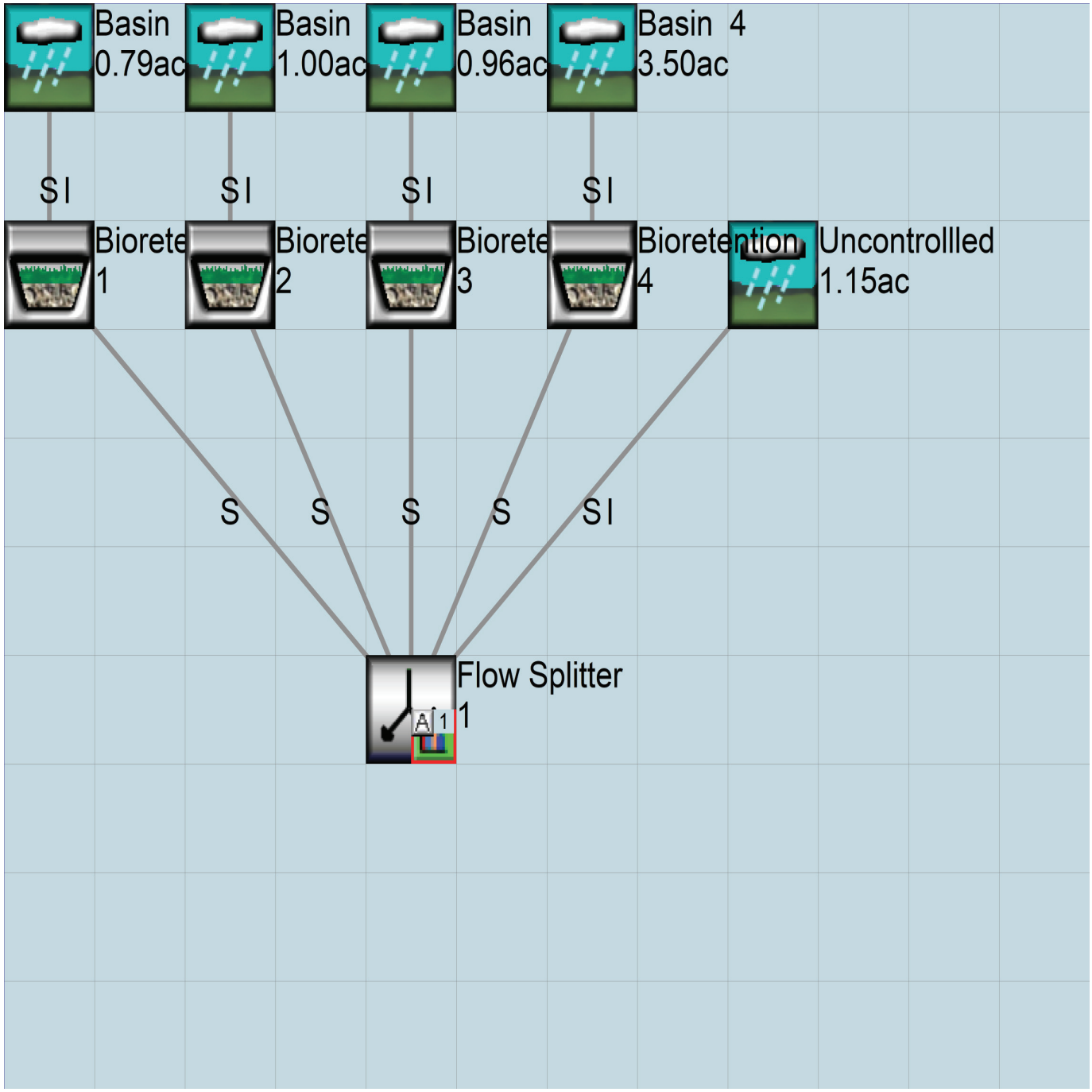
IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   Phase - B1.wdm
MESSU       25   PrePhase - B1.MES
            27   PrePhase - B1.L61
            28   PrePhase - B1.L62
            30   POCPhase - B11.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:15
      PERLND       1
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Basin  1                   MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                         User  t-series Engl Metr ***
                                      in  out           ***
    1     A/B, Forest, Flat       1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
    1         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ***************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
    1         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO
```

```
  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
    1         0    0    0    0    0    0    0    0    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
    1              0         5         2       400      0.05       0.3     0.996
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
    1              0         0         2         2         0         0         0
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                              ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
    1          0.2       0.5      0.35         0       0.7       0.7
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
    1              0         0         0         0         3         1         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                    in  out           ***
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************* Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
  END IWAT-STATE1
```

```
END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND   1                        9.15     COPY   501     12
PERLND   1                        9.15     COPY   501     13

******Routing******
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   48.4        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG            ***
                                       in  out                               ***
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************* Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************** PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                   ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
            FG FG FG FG  possible  exit  *** possible  exit      possible  exit
             *  *  *  *    *  *  *  *  *       *  *  *  *  *         ***
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                      ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    0.8            PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    0.8            IMPLND   1 999 EXTNL  PREC
```

```
WDM      1 EVAP     ENGL    0.76           PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76           IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY   501 OUTPUT MEAN   1 1     48.4      WDM    501 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>            <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13


END MASS-LINK

END RUN
```

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                    UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM        26   Phase - B1.wdm
MESSU      25   MitPhase - B1.MES
           27   MitPhase - B1.L61
           28   MitPhase - B1.L62
           30   POCPhase - B11.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:15
      PERLND       4
      IMPLND       1
      IMPLND       5
      IMPLND       8
      IMPLND       4
      RCHRES       1
      RCHRES       2
      RCHRES       3
      RCHRES       4
      RCHRES       5
      RCHRES       6
      RCHRES       7
      RCHRES       8
      RCHRES       9
      COPY         1
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Flow Splitter  1            MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                        in  out           ***
    4     A/B, Pasture, Flat      1    1    1    1   27    0
  END GEN-INFO
```

```
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
    4         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
    4         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
    4         0    0    0    0    0    0    0    0    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
    4               0         5       1.5       400      0.05       0.3     0.996
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
    4               0         0         2         2         0         0         0
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                            ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
    4          0.15       0.5       0.3         0       0.7       0.4
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
    4               0         0         0         0         3         1         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                     in  out           ***
    1      ROADS/FLAT             1    1    1   27    0
    5      DRIVEWAYS/FLAT         1    1    1   27    0
    8      SIDEWALKS/FLAT         1    1    1   27    0
    4      ROOF TOPS/FLAT         1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    1         0    0    1    0    0    0
    5         0    0    1    0    0    0
    8         0    0    1    0    0    0
    4         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
```

```
    1          0    0    4    0    0    0    1    9
    5          0    0    4    0    0    0    1    9
    8          0    0    4    0    0    0    1    9
    4          0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
    1          0    0    0    0    0
    5          0    0    0    0    0
    8          0    0    0    0    0
    4          0    0    0    0    0
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    1            400      0.01       0.1       0.1
    5            400      0.01       0.1       0.1
    8            400      0.01       0.1       0.1
    4            400      0.01       0.1       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    1              0         0
    5              0         0
    8              0         0
    4              0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    1              0         0
    5              0         0
    8              0         0
    4              0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND   4                      0.381     RCHRES   1      2
PERLND   4                      0.381     RCHRES   1      3
IMPLND   1                      0.196     RCHRES   1      5
IMPLND   5                      0.172     RCHRES   1      5
IMPLND   8                       0.04     RCHRES   1      5
Basin  2***
PERLND   4                      0.695     RCHRES   3      2
PERLND   4                      0.695     RCHRES   3      3
IMPLND   1                      0.157     RCHRES   3      5
IMPLND   5                      0.138     RCHRES   3      5
IMPLND   8                      0.007     RCHRES   3      5
Basin  3***
PERLND   4                      0.526     RCHRES   5      2
PERLND   4                      0.526     RCHRES   5      3
IMPLND   1                      0.214     RCHRES   5      5
IMPLND   5                      0.172     RCHRES   5      5
IMPLND   8                      0.047     RCHRES   5      5
Basin  4***
PERLND   4                      1.941     RCHRES   7      2
PERLND   4                      1.941     RCHRES   7      3
IMPLND   1                      0.583     RCHRES   7      5
IMPLND   4                      0.248     RCHRES   7      5
```

```
IMPLND   5                        0.654     RCHRES   7      5
IMPLND   8                        0.076     RCHRES   7      5
Uncontrollled***
PERLND   4                        1.154     RCHRES   9      2
PERLND   4                        1.154     RCHRES   9      3

******Routing******
RCHRES   2                            1     RCHRES   9      7
RCHRES   2                                  COPY     1     17
RCHRES   1                            1     RCHRES   9      7
RCHRES   1                                  COPY     1     17
RCHRES   1                            1     RCHRES   2      8
RCHRES   4                            1     RCHRES   9      7
RCHRES   4                                  COPY     1     17
RCHRES   3                            1     RCHRES   9      7
RCHRES   3                                  COPY     1     17
RCHRES   3                            1     RCHRES   4      8
RCHRES   6                            1     RCHRES   9      7
RCHRES   6                                  COPY     1     17
RCHRES   5                            1     RCHRES   9      7
RCHRES   5                                  COPY     1     17
RCHRES   5                            1     RCHRES   6      8
PERLND   4                        1.154     COPY     1     12
PERLND   4                        1.154     COPY     1     13
RCHRES   8                            1     RCHRES   9      7
RCHRES   8                                  COPY     1     17
RCHRES   7                            1     RCHRES   9      7
RCHRES   7                                  COPY     1     17
RCHRES   7                            1     RCHRES   8      8
RCHRES   9                            1     COPY   501     17
RCHRES   9                            1     COPY   601     17
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   48.4        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG            ***
                                       in  out                               ***
    1     Surface retentio-006    3    1    1    1   28    0    1
    2     Bioretention  1         2    1    1    1   28    0    1
    3     Surface retentio-010    3    1    1    1   28    0    1
    4     Bioretention  2         2    1    1    1   28    0    1
    5     Surface oretenti-012    3    1    1    1   28    0    1
    6     Bioretention 3          2    1    1    1   28    0    1
    7     Surface retentio-017    3    1    1    1   28    0    1
    8     Bioretention  4         2    1    1    1   28    0    1
    9     Flow Splitter  1-015    2    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************* Active Sections ******************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
    2         1    0    0    0    0    0    0    0    0    0
    3         1    0    0    0    0    0    0    0    0    0
    4         1    0    0    0    0    0    0    0    0    0
    5         1    0    0    0    0    0    0    0    0    0
    6         1    0    0    0    0    0    0    0    0    0
```

```
    7         1    0    0    0    0    0    0    0    0    0
    8         1    0    0    0    0    0    0    0    0    0
    9         1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ****************** PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
    2         4    0    0    0    0    0    0    0    0    0    1    9
    3         4    0    0    0    0    0    0    0    0    0    1    9
    4         4    0    0    0    0    0    0    0    0    0    1    9
    5         4    0    0    0    0    0    0    0    0    0    1    9
    6         4    0    0    0    0    0    0    0    0    0    1    9
    7         4    0    0    0    0    0    0    0    0    0    1    9
    8         4    0    0    0    0    0    0    0    0    0    1    9
    9         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
           FG FG FG FG  possible  exit  *** possible  exit      possible  exit
            *  *  *  *    *  *  *  *  *       *  *  *  *  *        ***
    1       0  1  0  0    4  5  6  0  0       0  0  0  0  0        2  2  2  2  2
    2       0  1  0  0    4  5  0  0  0       0  0  0  0  0        2  2  2  2  2
    3       0  1  0  0    4  5  6  0  0       0  0  0  0  0        2  2  2  2  2
    4       0  1  0  0    4  5  0  0  0       0  0  0  0  0        2  2  2  2  2
    5       0  1  0  0    4  5  6  0  0       0  0  0  0  0        2  2  2  2  2
    6       0  1  0  0    4  5  0  0  0       0  0  0  0  0        2  2  2  2  2
    7       0  1  0  0    4  5  6  0  0       0  0  0  0  0        2  2  2  2  2
    8       0  1  0  0    4  5  0  0  0       0  0  0  0  0        2  2  2  2  2
    9       0  1  0  0    4  5  0  0  0       0  0  0  0  0        2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN      DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><--------><       ***
    1               1      0.01       0.0       0.0       0.0       0.0
    2               2      0.04       0.0       0.0       0.5       0.0
    3               3      0.01       0.0       0.0       0.0       0.0
    4               4      0.01       0.0       0.0       0.5       0.0
    5               5      0.01       0.0       0.0       0.0       0.0
    6               6      0.06       0.0       0.0       0.5       0.0
    7               7      0.01       0.0       0.0       0.0       0.0
    8               8      0.09       0.0       0.0       0.5       0.0
    9               9      0.01       0.0       0.0       0.5       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
    1            0         4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    2            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    3            0         4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    4            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    5            0         4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    6            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    7            0         4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    8            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    9            0         4.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
  FTABLE      2
   47    5
```

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.047980	0.000000	0.000000	0.000000		
0.032967	0.047483	0.000076	0.000000	0.000000		
0.065934	0.046490	0.000166	0.000000	0.000046		
0.098901	0.045499	0.000270	0.000000	0.000105		
0.131868	0.044510	0.000387	0.000000	0.000247		
0.164835	0.043523	0.000519	0.000000	0.000489		
0.197802	0.042537	0.000664	0.000000	0.000865		
0.230769	0.041554	0.000823	0.000000	0.001414		
0.263736	0.040572	0.000996	0.000000	0.002180		
0.296703	0.039592	0.001184	0.000000	0.003211		
0.329670	0.038613	0.001385	0.000000	0.004562		
0.362637	0.037637	0.001600	0.000000	0.006290		
0.395604	0.036662	0.001829	0.000000	0.008460		
0.428571	0.035689	0.002073	0.000000	0.011140		
0.461538	0.034718	0.002330	0.000000	0.014405		
0.494505	0.033749	0.002602	0.000000	0.018336		
0.527473	0.032781	0.002887	0.000000	0.023017		
0.560440	0.031816	0.003187	0.000000	0.028540		
0.593407	0.030852	0.003501	0.000000	0.035002		
0.626374	0.029890	0.003830	0.000000	0.042507		
0.659341	0.028929	0.004173	0.000000	0.051164		
0.692308	0.027971	0.004530	0.000000	0.061088		
0.725275	0.027014	0.004901	0.000000	0.072402		
0.758242	0.026059	0.005287	0.000000	0.085233		
0.791209	0.025106	0.005687	0.000000	0.099716		
0.824176	0.024155	0.006101	0.000000	0.115994		
0.857143	0.023205	0.006530	0.000000	0.134214		
0.890110	0.022257	0.006973	0.000000	0.150694		
0.923077	0.021311	0.007431	0.000000	0.155545		
0.956044	0.020367	0.007904	0.000000	0.160404		
0.989011	0.019425	0.008391	0.000000	0.165273		
1.021978	0.018484	0.008892	0.000000	0.170151		
1.054945	0.017546	0.009408	0.000000	0.175038		
1.087912	0.016609	0.009939	0.000000	0.179934		
1.120879	0.015673	0.010484	0.000000	0.184839		
1.153846	0.014740	0.011044	0.000000	0.189753		
1.186813	0.013808	0.011619	0.000000	0.194676		
1.219780	0.012879	0.012209	0.000000	0.199609		
1.252747	0.011951	0.012813	0.000000	0.204550		
1.285714	0.011024	0.013432	0.000000	0.209500		
1.318681	0.010100	0.014066	0.000000	0.214460		
1.351648	0.009177	0.014714	0.000000	0.219428		
1.384615	0.008257	0.015378	0.000000	0.224406		
1.417582	0.007338	0.016057	0.000000	0.229392		
1.450549	0.006420	0.016750	0.000000	0.234388		
1.483516	0.005505	0.017458	0.000000	0.239392		
1.500000	0.004591	0.022816	0.000000	0.241898		

END FTABLE 2

FTABLE 1

47 6

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	outflow 3 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.004591	0.000000	0.000000	0.000000	0.005018		
0.032967	0.048975	0.001598	0.000000	0.055556	0.005018		
0.065934	0.049972	0.003229	0.000000	0.057998	0.010046		
0.098901	0.050971	0.004893	0.000000	0.059219	0.015082		
0.131868	0.051972	0.006590	0.000000	0.060440	0.020127		
0.164835	0.052975	0.008320	0.000000	0.061661	0.025182		
0.197802	0.053979	0.010083	0.000000	0.062882	0.030245		
0.230769	0.054985	0.011879	0.000000	0.064103	0.035318		
0.263736	0.055993	0.013708	0.000000	0.065324	0.040400		
0.296703	0.057003	0.015571	0.000000	0.066545	0.045490		
0.329670	0.058014	0.017467	0.000000	0.067766	0.050590		
0.362637	0.059028	0.019396	0.000000	0.068987	0.055699		
0.395604	0.060043	0.021359	0.000000	0.070208	0.060817		
0.428571	0.061060	0.023355	0.000000	0.071429	0.065944		

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0.461538  0.062078  0.025385  0.000000  0.072650  0.071080
0.494505  0.063099  0.027448  0.000000  0.073871  0.076225
0.527473  0.064121  0.029545  0.000000  0.075092  0.081379
0.560440  0.065145  0.031676  0.000000  0.076313  0.086542
0.593407  0.066171  0.033840  0.000000  0.077534  0.091714
0.626374  0.067199  0.036039  0.000000  0.078755  0.096896
0.659341  0.068228  0.038271  0.000000  0.079976  0.102086
0.692308  0.069260  0.040537  0.000000  0.081197  0.107286
0.725275  0.070293  0.042838  0.000000  0.082418  0.112494
0.758242  0.071328  0.045172  0.000000  0.083639  0.117711
0.791209  0.072364  0.047541  0.000000  0.084860  0.122938
0.824176  0.073403  0.049943  0.000000  0.086081  0.128174
0.857143  0.074443  0.052380  0.000000  0.087302  0.133418
0.890110  0.075485  0.054852  0.000000  0.088523  0.138672
0.923077  0.076529  0.057357  0.000000  0.089744  0.143935
0.956044  0.077575  0.059898  0.000000  0.090965  0.149207
0.989011  0.078622  0.062472  0.000000  0.092186  0.154488
1.021978  0.079671  0.065081  0.034569  0.093407  0.159778
1.054945  0.080722  0.067725  0.136453  0.094628  0.165077
1.087912  0.081775  0.070404  0.275387  0.095849  0.170385
1.120879  0.082830  0.073117  0.441409  0.097070  0.175702
1.153846  0.083886  0.075865  0.627270  0.098291  0.181028
1.186813  0.084944  0.078648  0.826090  0.099512  0.186363
1.219780  0.086004  0.081466  1.030827  0.100733  0.191708
1.252747  0.087066  0.084319  1.234286  0.101954  0.197061
1.285714  0.088130  0.087207  1.429395  0.103175  0.202423
1.318681  0.089195  0.090129  1.609623  0.104396  0.207795
1.351648  0.090263  0.093088  1.769522  0.105617  0.213175
1.384615  0.091332  0.096081  1.905359  0.106838  0.218565
1.417582  0.092402  0.099109  2.015818  0.108059  0.223964
1.450549  0.093475  0.102173  2.102770  0.109280  0.229371
1.483516  0.094549  0.105273  2.172110  0.110501  0.234788
1.500000  0.095087  0.106836  2.263538  0.111111  0.237500
END FTABLE  1
FTABLE      4
 47    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.013545  0.000000  0.000000  0.000000
0.032967  0.013388  0.000019  0.000000  0.000000
0.065934  0.013077  0.000042  0.000000  0.000012
0.098901  0.012767  0.000068  0.000000  0.000027
0.131868  0.012459  0.000097  0.000000  0.000063
0.164835  0.012153  0.000131  0.000000  0.000124
0.197802  0.011848  0.000168  0.000000  0.000220
0.230769  0.011546  0.000208  0.000000  0.000361
0.263736  0.011245  0.000252  0.000000  0.000558
0.296703  0.010946  0.000300  0.000000  0.000824
0.329670  0.010649  0.000352  0.000000  0.001174
0.362637  0.010354  0.000408  0.000000  0.001623
0.395604  0.010060  0.000467  0.000000  0.002189
0.428571  0.009768  0.000530  0.000000  0.002891
0.461538  0.009478  0.000597  0.000000  0.003749
0.494505  0.009190  0.000668  0.000000  0.004785
0.527473  0.008904  0.000742  0.000000  0.006023
0.560440  0.008619  0.000821  0.000000  0.007489
0.593407  0.008336  0.000903  0.000000  0.009210
0.626374  0.008055  0.000990  0.000000  0.011215
0.659341  0.007776  0.001081  0.000000  0.013535
0.692308  0.007499  0.001175  0.000000  0.016204
0.725275  0.007223  0.001274  0.000000  0.019257
0.758242  0.006949  0.001376  0.000000  0.022730
0.791209  0.006677  0.001483  0.000000  0.026663
0.824176  0.006407  0.001594  0.000000  0.031098
0.857143  0.006139  0.001709  0.000000  0.036077
0.890110  0.005872  0.001829  0.000000  0.040613
0.923077  0.005607  0.001952  0.000000  0.042030
0.956044  0.005344  0.002080  0.000000  0.043455
0.989011  0.005083  0.002212  0.000000  0.044890
1.021978  0.004824  0.002349  0.000000  0.046334
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  1.054945  0.004566  0.002489  0.000000  0.047787
  1.087912  0.004310  0.002634  0.000000  0.049249
  1.120879  0.004056  0.002784  0.000000  0.050720
  1.153846  0.003804  0.002938  0.000000  0.052200
  1.186813  0.003554  0.003096  0.000000  0.053689
  1.219780  0.003305  0.003259  0.000000  0.055187
  1.252747  0.003058  0.003426  0.000000  0.056694
  1.285714  0.002813  0.003598  0.000000  0.058211
  1.318681  0.002570  0.003774  0.000000  0.059736
  1.351648  0.002328  0.003955  0.000000  0.061270
  1.384615  0.002089  0.004141  0.000000  0.062814
  1.417582  0.001851  0.004331  0.000000  0.064366
  1.450549  0.001615  0.004526  0.000000  0.065928
  1.483516  0.001380  0.004725  0.000000  0.067498
  1.500000  0.001148  0.006238  0.000000  0.068287
  END FTABLE  4
  FTABLE      3
   47    6
     Depth      Area    Volume  Outflow1  Outflow2  outflow 3 Velocity  Travel
Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)     (cfs)   (ft/sec)
(Minutes)***
  0.000000  0.001148  0.000000  0.000000  0.000000  0.001584
  0.032967  0.013859  0.000452  0.000000  0.013889  0.001584
  0.065934  0.014175  0.000914  0.000000  0.014499  0.003177
  0.098901  0.014493  0.001386  0.000000  0.014805  0.004780
  0.131868  0.014812  0.001869  0.000000  0.015110  0.006391
  0.164835  0.015134  0.002363  0.000000  0.015415  0.008012
  0.197802  0.015457  0.002867  0.000000  0.015720  0.009641
  0.230769  0.015782  0.003382  0.000000  0.016026  0.011280
  0.263736  0.016109  0.003908  0.000000  0.016331  0.012927
  0.296703  0.016437  0.004444  0.000000  0.016636  0.014584
  0.329670  0.016768  0.004992  0.000000  0.016941  0.016250
  0.362637  0.017100  0.005550  0.000000  0.017247  0.017924
  0.395604  0.017434  0.006119  0.000000  0.017552  0.019608
  0.428571  0.017770  0.006699  0.000000  0.017857  0.021301
  0.461538  0.018107  0.007291  0.000000  0.018162  0.023003
  0.494505  0.018446  0.007893  0.000000  0.018468  0.024714
  0.527473  0.018788  0.008507  0.000000  0.018773  0.026434
  0.560440  0.019131  0.009132  0.000000  0.019078  0.028163
  0.593407  0.019475  0.009768  0.000000  0.019383  0.029901
  0.626374  0.019822  0.010416  0.000000  0.019689  0.031649
  0.659341  0.020170  0.011075  0.000000  0.019994  0.033405
  0.692308  0.020520  0.011746  0.000000  0.020299  0.035170
  0.725275  0.020872  0.012428  0.000000  0.020604  0.036945
  0.758242  0.021226  0.013122  0.000000  0.020910  0.038728
  0.791209  0.021582  0.013828  0.000000  0.021215  0.040520
  0.824176  0.021939  0.014545  0.000000  0.021520  0.042322
  0.857143  0.022298  0.015275  0.000000  0.021825  0.044133
  0.890110  0.022659  0.016016  0.000000  0.022131  0.045952
  0.923077  0.023022  0.016769  0.000000  0.022436  0.047781
  0.956044  0.023386  0.017534  0.000000  0.022741  0.049619
  0.989011  0.023753  0.018311  0.000000  0.023046  0.051466
  1.021978  0.024121  0.019100  0.034569  0.023352  0.053322
  1.054945  0.024491  0.019901  0.136453  0.023657  0.055187
  1.087912  0.024862  0.020714  0.275387  0.023962  0.057061
  1.120879  0.025236  0.021540  0.441409  0.024267  0.058944
  1.153846  0.025611  0.022378  0.627270  0.024573  0.060836
  1.186813  0.025988  0.023229  0.826090  0.024878  0.062737
  1.219780  0.026367  0.024092  1.030827  0.025183  0.064647
  1.252747  0.026748  0.024967  1.234286  0.025488  0.066567
  1.285714  0.027130  0.025856  1.429395  0.025794  0.068495
  1.318681  0.027515  0.026756  1.609623  0.026099  0.070432
  1.351648  0.027901  0.027670  1.769522  0.026404  0.072379
  1.384615  0.028289  0.028596  1.905359  0.026709  0.074334
  1.417582  0.028678  0.029535  2.015818  0.027015  0.076299
  1.450549  0.029070  0.030487  2.102770  0.027320  0.078273
  1.483516  0.029463  0.031452  2.172110  0.027625  0.080255
  1.500000  0.029660  0.031939  2.263538  0.027778  0.081250
  END FTABLE  3
```

FTABLE 6
47 5

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.073003	0.000000	0.000000	0.000000		
0.032967	0.072258	0.000118	0.000000	0.000000		
0.065934	0.070771	0.000256	0.000000	0.000071		
0.098901	0.069285	0.000416	0.000000	0.000162		
0.131868	0.067801	0.000598	0.000000	0.000381		
0.164835	0.066319	0.000801	0.000000	0.000754		
0.197802	0.064838	0.001025	0.000000	0.001333		
0.230769	0.063359	0.001270	0.000000	0.002179		
0.263736	0.061883	0.001537	0.000000	0.003359		
0.296703	0.060408	0.001825	0.000000	0.004946		
0.329670	0.058934	0.002135	0.000000	0.007024		
0.362637	0.057463	0.002466	0.000000	0.009681		
0.395604	0.055993	0.002819	0.000000	0.013016		
0.428571	0.054525	0.003193	0.000000	0.017134		
0.461538	0.053059	0.003589	0.000000	0.022149		
0.494505	0.051595	0.004007	0.000000	0.028183		
0.527473	0.050133	0.004446	0.000000	0.035366		
0.560440	0.048672	0.004907	0.000000	0.043837		
0.593407	0.047213	0.005389	0.000000	0.053745		
0.626374	0.045756	0.005893	0.000000	0.065246		
0.659341	0.044301	0.006419	0.000000	0.078507		
0.692308	0.042847	0.006967	0.000000	0.093704		
0.725275	0.041395	0.007537	0.000000	0.111020		
0.758242	0.039946	0.008128	0.000000	0.130651		
0.791209	0.038497	0.008741	0.000000	0.152802		
0.824176	0.037051	0.009376	0.000000	0.177686		
0.857143	0.035607	0.010033	0.000000	0.205528		
0.890110	0.034164	0.010712	0.000000	0.230686		
0.923077	0.032723	0.011413	0.000000	0.238032		
0.956044	0.031284	0.012135	0.000000	0.245387		
0.989011	0.029847	0.012880	0.000000	0.252752		
1.021978	0.028411	0.013647	0.000000	0.260125		
1.054945	0.026977	0.014436	0.000000	0.267507		
1.087912	0.025545	0.015247	0.000000	0.274899		
1.120879	0.024115	0.016080	0.000000	0.282299		
1.153846	0.022687	0.016935	0.000000	0.289709		
1.186813	0.021260	0.017812	0.000000	0.297127		
1.219780	0.019836	0.018712	0.000000	0.304555		
1.252747	0.018413	0.019634	0.000000	0.311992		
1.285714	0.016991	0.020578	0.000000	0.319437		
1.318681	0.015572	0.021544	0.000000	0.326892		
1.351648	0.014155	0.022533	0.000000	0.334356		
1.384615	0.012739	0.023544	0.000000	0.341829		
1.417582	0.011325	0.024577	0.000000	0.349311		
1.450549	0.009913	0.025633	0.000000	0.356802		
1.483516	0.008502	0.026711	0.000000	0.364302		
1.500000	0.007094	0.034863	0.000000	0.368056		

END FTABLE 6
FTABLE 5
47 6

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	outflow 3 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.007094	0.000000	0.000000	0.000000	0.007514		
0.032967	0.074493	0.002431	0.000000	0.085833	0.007514		
0.065934	0.075985	0.004912	0.000000	0.089606	0.015036		
0.098901	0.077479	0.007441	0.000000	0.091493	0.022568		
0.131868	0.078975	0.010020	0.000000	0.093379	0.030109		
0.164835	0.080472	0.012648	0.000000	0.095266	0.037659		
0.197802	0.081972	0.015326	0.000000	0.097152	0.045218		
0.230769	0.083473	0.018053	0.000000	0.099039	0.052786		
0.263736	0.084976	0.020830	0.000000	0.100925	0.060363		
0.296703	0.086480	0.023656	0.000000	0.102811	0.067949		
0.329670	0.087987	0.026532	0.000000	0.104698	0.075544		
0.362637	0.089495	0.029457	0.000000	0.106584	0.083149		

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0.395604  0.091005  0.032433  0.000000  0.108471  0.090762
0.428571  0.092517  0.035458  0.000000  0.110357  0.098384
0.461538  0.094031  0.038533  0.000000  0.112244  0.106016
0.494505  0.095546  0.041658  0.000000  0.114130  0.113656
0.527473  0.097063  0.044832  0.000000  0.116017  0.121306
0.560440  0.098582  0.048057  0.000000  0.117903  0.128964
0.593407  0.100103  0.051332  0.000000  0.119789  0.136632
0.626374  0.101626  0.054658  0.000000  0.121676  0.144309
0.659341  0.103150  0.058033  0.000000  0.123562  0.151995
0.692308  0.104677  0.061459  0.000000  0.125449  0.159689
0.725275  0.106205  0.064935  0.000000  0.127335  0.167393
0.758242  0.107735  0.068461  0.000000  0.129222  0.175106
0.791209  0.109266  0.072038  0.000000  0.131108  0.182828
0.824176  0.110800  0.075666  0.000000  0.132995  0.190559
0.857143  0.112335  0.079344  0.000000  0.134881  0.198299
0.890110  0.113872  0.083072  0.000000  0.136768  0.206048
0.923077  0.115411  0.086852  0.000000  0.138654  0.213807
0.956044  0.116951  0.090682  0.000000  0.140540  0.221574
0.989011  0.118494  0.094563  0.000000  0.142427  0.229350
1.021978  0.120038  0.098495  0.034569  0.144313  0.237136
1.054945  0.121584  0.102478  0.136453  0.146200  0.244930
1.087912  0.123132  0.106511  0.275387  0.148086  0.252734
1.120879  0.124681  0.110596  0.441409  0.149973  0.260546
1.153846  0.126233  0.114732  0.627270  0.151859  0.268368
1.186813  0.127786  0.118919  0.826090  0.153746  0.276199
1.219780  0.129341  0.123158  1.030827  0.155632  0.284038
1.252747  0.130898  0.127447  1.234286  0.157518  0.291887
1.285714  0.132456  0.131788  1.429395  0.159405  0.299745
1.318681  0.134017  0.136181  1.609623  0.161291  0.307612
1.351648  0.135579  0.140625  1.769522  0.163178  0.315488
1.384615  0.137143  0.145120  1.905359  0.165064  0.323373
1.417582  0.138709  0.149667  2.015818  0.166951  0.331267
1.450549  0.140276  0.154266  2.102770  0.168837  0.339170
1.483516  0.141846  0.158916  2.172110  0.170724  0.347082
1.500000  0.142631  0.161261  2.263538  0.171667  0.351042
END FTABLE  5
FTABLE      9
 90    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.002296  0.000000  0.000000  0.000000
0.111111  0.002296  0.000255  0.578919  0.000000
0.222222  0.002296  0.000510  0.818714  0.000000
0.333333  0.002296  0.000765  1.002716  0.000000
0.444444  0.002296  0.001020  1.157837  0.000000
0.555556  0.002296  0.001275  1.294501  0.000000
0.666667  0.002296  0.001530  1.418055  0.000000
0.777778  0.002296  0.001786  1.531674  0.000000
0.888889  0.002296  0.002041  1.637429  0.000000
1.000000  0.002296  0.002296  1.736756  0.000000
1.111111  0.002296  0.002551  1.830701  0.000000
1.222222  0.002296  0.002806  1.920056  0.000000
1.333333  0.002296  0.003061  2.005433  0.000000
1.444444  0.002296  0.003316  2.087320  0.000000
1.555556  0.002296  0.003571  2.166115  0.000000
1.666667  0.002296  0.003826  2.242142  0.000000
1.777778  0.002296  0.004081  2.315674  0.000000
1.888889  0.002296  0.004336  2.386942  0.000000
2.000000  0.002296  0.004591  2.456143  0.000000
2.111111  0.002296  0.004846  2.523447  0.000000
2.222222  0.002296  0.005102  2.589002  0.000000
2.333333  0.002296  0.005357  2.652938  0.000000
2.444444  0.002296  0.005612  2.715369  0.000000
2.555556  0.002296  0.005867  2.776396  0.000000
2.666667  0.002296  0.006122  2.836110  0.000000
2.777778  0.002296  0.006377  2.894593  0.000000
2.888889  0.002296  0.006632  2.951917  0.000000
3.000000  0.002296  0.006887  3.008149  0.000000
3.111111  0.002296  0.007142  3.063349  0.000000
3.222222  0.002296  0.007397  3.117572  0.000000
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```
3.333333  0.002296  0.007652  3.170867  0.000000
3.444444  0.002296  0.007907  3.223282  0.000000
3.555556  0.002296  0.008162  3.274858  0.000000
3.666667  0.002296  0.008418  3.325634  0.000000
3.777778  0.002296  0.008673  3.375646  0.000000
3.888889  0.002296  0.008928  3.424928  0.000000
4.000000  0.002296  0.009183  3.473511  0.000000
4.111111  0.002296  0.009438  3.521424  0.000000
4.222222  0.002296  0.009693  3.568693  0.000000
4.333333  0.002296  0.009948  3.615345  0.000000
4.444444  0.002296  0.010203  3.661402  0.000000
4.555556  0.002296  0.010458  3.706887  0.000000
4.666667  0.002296  0.010713  3.751821  0.000000
4.777778  0.002296  0.010968  3.796223  0.000000
4.888889  0.002296  0.011223  3.840111  0.000000
5.000000  0.002296  0.011478  3.883503  0.000000
5.111111  0.002296  0.011733  5.104578  0.000000
5.222222  0.002296  0.011989  7.293994  0.000000
5.333333  0.002296  0.012244  10.08785  0.000000
5.444444  0.002296  0.012499  13.31239  0.000000
5.555556  0.002296  0.012754  16.81491  0.000000
5.666667  0.002296  0.013009  20.44030  0.000000
5.777778  0.002296  0.013264  24.02975  0.000000
5.888889  0.002296  0.013519  27.42824  0.000000
6.000000  0.002296  0.013774  30.49683  0.000000
6.111111  0.002296  0.014029  33.12836  0.000000
6.222222  0.002296  0.014284  35.26584  0.000000
6.333333  0.002296  0.014539  36.92308  0.000000
6.444444  0.002296  0.014794  38.20726  0.000000
6.555556  0.002296  0.015049  39.80127  0.000000
6.666667  0.002296  0.015305  41.07968  0.000000
6.777778  0.002296  0.015560  42.31706  0.000000
6.888889  0.002296  0.015815  43.51718  0.000000
7.000000  0.002296  0.016070  44.68327  0.000000
7.111111  0.002296  0.016325  45.81811  0.000000
7.222222  0.002296  0.016580  46.92411  0.000000
7.333333  0.002296  0.016835  48.00341  0.000000
7.444444  0.002296  0.017090  49.05788  0.000000
7.555556  0.002296  0.017345  50.08917  0.000000
7.666667  0.002296  0.017600  51.09878  0.000000
7.777778  0.002296  0.017855  52.08803  0.000000
7.888889  0.002296  0.018110  53.05813  0.000000
8.000000  0.002296  0.018365  54.01016  0.000000
8.111111  0.002296  0.018621  54.94511  0.000000
8.222222  0.002296  0.018876  55.86388  0.000000
8.333333  0.002296  0.019131  56.76728  0.000000
8.444444  0.002296  0.019386  57.65609  0.000000
8.555556  0.002296  0.019641  58.53098  0.000000
8.666667  0.002296  0.019896  59.39261  0.000000
8.777778  0.002296  0.020151  60.24156  0.000000
8.888889  0.002296  0.020406  61.07839  0.000000
9.000000  0.002296  0.020661  61.90361  0.000000
9.111111  0.002296  0.020916  62.71768  0.000000
9.222222  0.002296  0.021171  63.52107  0.000000
9.333333  0.002296  0.021426  64.31418  0.000000
9.444444  0.002296  0.021681  65.09739  0.000000
9.555556  0.002296  0.021937  65.87109  0.000000
9.666667  0.002296  0.022192  66.63560  0.000000
9.777778  0.002296  0.022447  67.39125  0.000000
9.888889  0.002296  0.022702  68.13835  0.000000
END FTABLE  9
FTABLE      8
 47    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.105372  0.000000  0.000000  0.000000
0.032967  0.104307  0.000171  0.000000  0.000000
0.065934  0.102179  0.000373  0.000000  0.000104
0.098901  0.100053  0.000606  0.000000  0.000236
0.131868  0.097929  0.000870  0.000000  0.000555
```

```
  0.164835  0.095806  0.001165  0.000000  0.001097
  0.197802  0.093686  0.001491  0.000000  0.001940
  0.230769  0.091567  0.001848  0.000000  0.003169
  0.263736  0.089450  0.002236  0.000000  0.004883
  0.296703  0.087334  0.002655  0.000000  0.007190
  0.329670  0.085221  0.003106  0.000000  0.010208
  0.362637  0.083109  0.003587  0.000000  0.014068
  0.395604  0.080999  0.004100  0.000000  0.018911
  0.428571  0.078891  0.004643  0.000000  0.024889
  0.461538  0.076785  0.005219  0.000000  0.032166
  0.494505  0.074680  0.005825  0.000000  0.040921
  0.527473  0.072578  0.006462  0.000000  0.051340
  0.560440  0.070477  0.007131  0.000000  0.063625
  0.593407  0.068377  0.007831  0.000000  0.077990
  0.626374  0.066280  0.008563  0.000000  0.094661
  0.659341  0.064185  0.009326  0.000000  0.113878
  0.692308  0.062091  0.010120  0.000000  0.135894
  0.725275  0.059999  0.010946  0.000000  0.160976
  0.758242  0.057909  0.011803  0.000000  0.189404
  0.791209  0.055820  0.012692  0.000000  0.221472
  0.824176  0.053734  0.013612  0.000000  0.257488
  0.857143  0.051649  0.014564  0.000000  0.297777
  0.890110  0.049566  0.015548  0.000000  0.334162
  0.923077  0.047485  0.016563  0.000000  0.344736
  0.956044  0.045405  0.017609  0.000000  0.355319
  0.989011  0.043328  0.018688  0.000000  0.365912
  1.021978  0.041252  0.019798  0.000000  0.376513
  1.054945  0.039178  0.020939  0.000000  0.387123
  1.087912  0.037106  0.022113  0.000000  0.397743
  1.120879  0.035035  0.023318  0.000000  0.408371
  1.153846  0.032967  0.024555  0.000000  0.419009
  1.186813  0.030900  0.025824  0.000000  0.429655
  1.219780  0.028835  0.027125  0.000000  0.440311
  1.252747  0.026772  0.028457  0.000000  0.450976
  1.285714  0.024710  0.029822  0.000000  0.461650
  1.318681  0.022651  0.031218  0.000000  0.472332
  1.351648  0.020593  0.032647  0.000000  0.483024
  1.384615  0.018537  0.034107  0.000000  0.493725
  1.417582  0.016483  0.035599  0.000000  0.504435
  1.450549  0.014430  0.037124  0.000000  0.515154
  1.483516  0.012379  0.038680  0.000000  0.525883
  1.500000  0.010331  0.050447  0.000000  0.531250
  END FTABLE  8
  FTABLE      7
   47    6
     Depth      Area    Volume  Outflow1  Outflow2  outflow 3 Velocity  Travel
Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)     (cfs)   (ft/sec)
(Minutes)***
  0.000000  0.010331  0.000000  0.000000  0.000000  0.010742
  0.032967  0.107502  0.003509  0.000000  0.125000  0.010742
  0.065934  0.109635  0.007088  0.000000  0.130495  0.021492
  0.098901  0.111769  0.010738  0.000000  0.133242  0.032252
  0.131868  0.113905  0.014458  0.000000  0.135989  0.043021
  0.164835  0.116043  0.018248  0.000000  0.138736  0.053799
  0.197802  0.118182  0.022109  0.000000  0.141484  0.064586
  0.230769  0.120324  0.026040  0.000000  0.144231  0.075382
  0.263736  0.122467  0.030042  0.000000  0.146978  0.086187
  0.296703  0.124612  0.034115  0.000000  0.149725  0.097001
  0.329670  0.126759  0.038258  0.000000  0.152473  0.107825
  0.362637  0.128907  0.042473  0.000000  0.155220  0.118657
  0.395604  0.131058  0.046758  0.000000  0.157967  0.129498
  0.428571  0.133210  0.051114  0.000000  0.160714  0.140349
  0.461538  0.135364  0.055541  0.000000  0.163462  0.151208
  0.494505  0.137519  0.060039  0.000000  0.166209  0.162077
  0.527473  0.139677  0.064608  0.000000  0.168956  0.172954
  0.560440  0.141836  0.069248  0.000000  0.171703  0.183841
  0.593407  0.143997  0.073960  0.000000  0.174451  0.194736
  0.626374  0.146160  0.078743  0.000000  0.177198  0.205641
  0.659341  0.148325  0.083597  0.000000  0.179945  0.216555
```

```
  0.692308  0.150491  0.088522  0.000000  0.182692  0.227478
  0.725275  0.152660  0.093519  0.000000  0.185440  0.238410
  0.758242  0.154830  0.098588  0.000000  0.188187  0.249351
  0.791209  0.157002  0.103728  0.000000  0.190934  0.260301
  0.824176  0.159175  0.108940  0.000000  0.193681  0.271260
  0.857143  0.161351  0.114223  0.000000  0.196429  0.282228
  0.890110  0.163528  0.119578  0.000000  0.199176  0.293205
  0.923077  0.165707  0.125005  0.000000  0.201923  0.304191
  0.956044  0.167888  0.130504  0.000000  0.204670  0.315187
  0.989011  0.170071  0.136075  0.000000  0.207418  0.326191
  1.021978  0.172255  0.141718  0.034569  0.210165  0.337204
  1.054945  0.174442  0.147432  0.136453  0.212912  0.348227
  1.087912  0.176630  0.153219  0.275387  0.215660  0.359258
  1.120879  0.178820  0.159078  0.441409  0.218407  0.370299
  1.153846  0.181011  0.165010  0.627270  0.221154  0.381349
  1.186813  0.183205  0.171013  0.826090  0.223901  0.392407
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  1.252747  0.187597  0.183237  1.234286  0.229396  0.414552
  1.285714  0.189796  0.189458  1.429395  0.232143  0.425638
  1.318681  0.191997  0.195751  1.609623  0.234890  0.436733
  1.351648  0.194199  0.202117  1.769522  0.237638  0.447837
  1.384615  0.196403  0.208556  1.905359  0.240385  0.458950
  1.417582  0.198609  0.215067  2.015818  0.243132  0.470072
  1.450549  0.200817  0.221651  2.102770  0.245879  0.481203
  1.483516  0.203027  0.228308  2.172110  0.248627  0.492343
  1.500000  0.204132  0.231663  2.263538  0.250000  0.497917
  END FTABLE  7
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    0.8             PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    0.8             IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    0.76            PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76            IMPLND   1 999 EXTNL  PETINP
WDM      2 PREC     ENGL    0.8             RCHRES   1     EXTNL  PREC
WDM      2 PREC     ENGL    0.8             RCHRES   3     EXTNL  PREC
WDM      2 PREC     ENGL    0.8             RCHRES   5     EXTNL  PREC
WDM      2 PREC     ENGL    0.8             RCHRES   7     EXTNL  PREC
WDM      1 EVAP     ENGL    0.5             RCHRES   1     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.76            RCHRES   2     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.5             RCHRES   3     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.76            RCHRES   4     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.5             RCHRES   5     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.76            RCHRES   6     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.5             RCHRES   7     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.76            RCHRES   8     EXTNL  POTEV

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
RCHRES   9 HYDR   RO     1 1        1      WDM   1006 FLOW     ENGL      REPL
RCHRES   9 HYDR   O      1 1        1      WDM   1007 FLOW     ENGL      REPL
RCHRES   9 HYDR   O      2 1        1      WDM   1008 FLOW     ENGL      REPL
RCHRES   9 HYDR   STAGE  1 1        1      WDM   1009 STAG     ENGL      REPL
COPY     1 OUTPUT MEAN   1 1     48.4      WDM    701 FLOW     ENGL      REPL
COPY   501 OUTPUT MEAN   1 1     48.4      WDM    801 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>             <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK        2
PERLND     PWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    2

  MASS-LINK        3
```

```
PERLND     PWATER IFWO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    3

  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5

  MASS-LINK        7
RCHRES     OFLOW  OVOL   1                 RCHRES         INFLOW IVOL
  END MASS-LINK    7

  MASS-LINK        8
RCHRES     OFLOW  OVOL   2                 RCHRES         INFLOW IVOL
  END MASS-LINK    8

  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13

  MASS-LINK       17
RCHRES     OFLOW  OVOL   1                 COPY           INPUT  MEAN
  END MASS-LINK   17

  MASS-LINK       18
RCHRES     OFLOW  OVOL   2                 COPY           INPUT  MEAN
  END MASS-LINK   18


END MASS-LINK

END RUN
```

Predeveloped HSPF Message File

Mitigated HSPF Message File

Disclaimer

Legal Notice

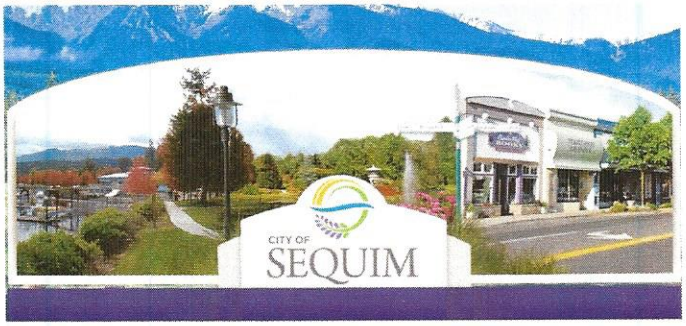
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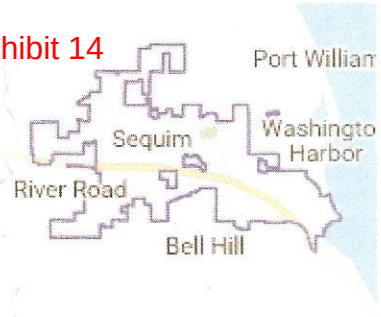
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6200 Capitol Blvd. Ste F
Olympia, WA. 98501
Toll Free 1(866)943-0304
Local (360)943-0304

www.clearcreeksolutions.com

Exhibit 14



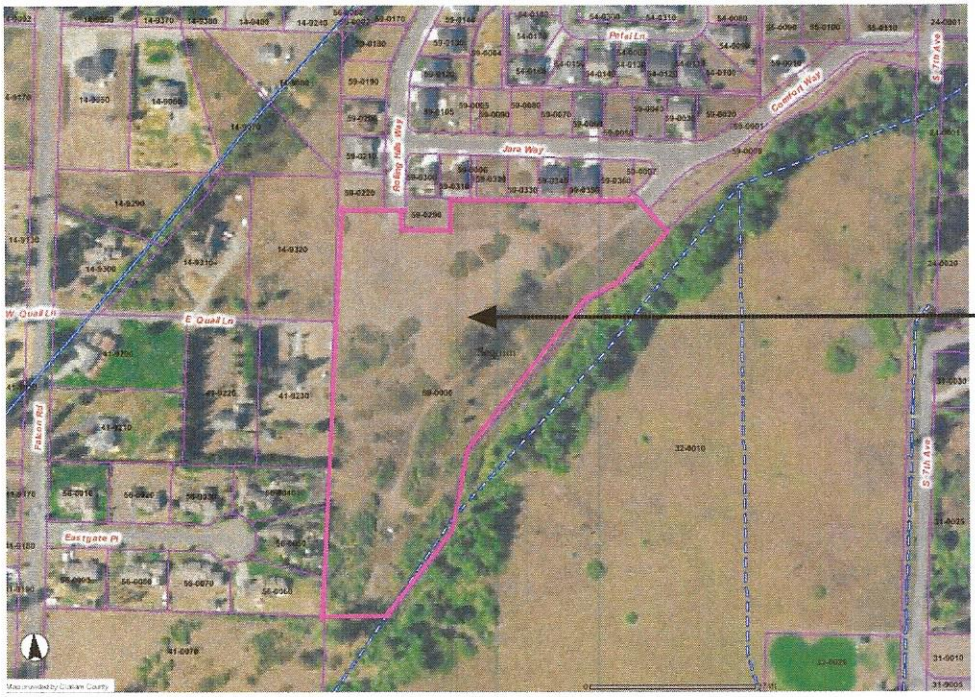




Sequim

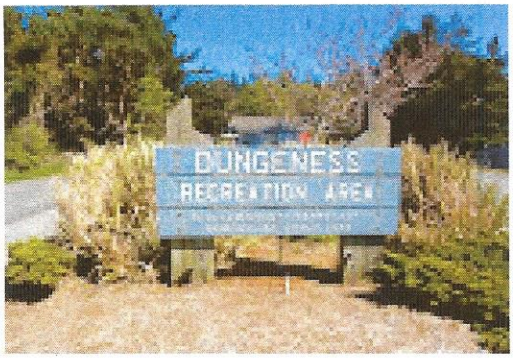
HOME SUBDIVISION PHASE B
TRAFFIC IMPACT ANALYSIS

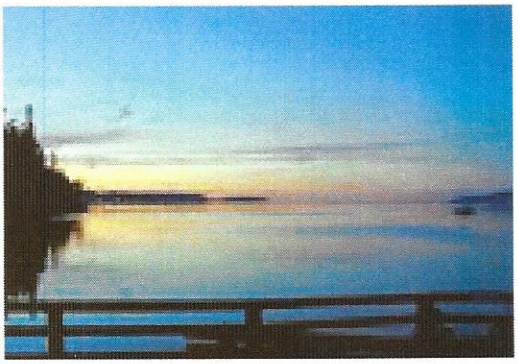
October 4, 2018

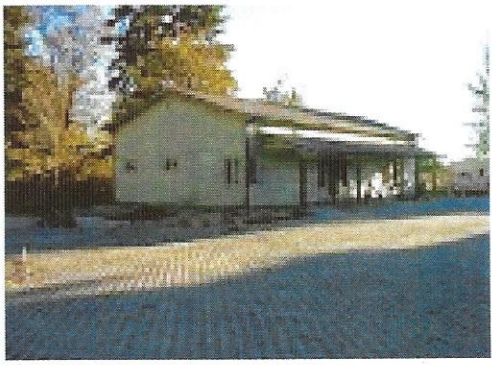




JTE . Jake Traffic Engineering, Inc.
Mark J. Jacobs, PE (OR and WA), PTOE, President
2614 39th Ave SW – Seattle, WA 98116 – 2503
Tel. 206.762.1978 - Cell 206.799.5692
E-mail jaketraffic@comcast.net







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Tel. 206.762.1978 - Cell 206.799.5692
E-mail jaketraffic@comcast.net

October 4, 2018

GREEN CROW PROPERTIES, LLC
Attn: Bruce Emery, Project Lead
727 E. 8th St,
Port Angeles, WA 98362

Re: Home Subdivision Phase B – Sequim, WA
Traffic Impact Analysis

Dear Mr. Emery,

I am pleased to present this Traffic Impact Analysis for the 31 lot Home Subdivision Phase B SFDU residential project generally located between South 7th Avenue and Rolling Hills Way and south of Jara Place in the City of Sequim. Access to the project would be via the extension of Comfort Way and Rolling Hills Way into the subject site.

The Scope of Work for this study is based on recent work experience in Sequim and my extensive traffic engineering work conducted. Per my review of the site the following intersections are studied in this report.

1. E. Silberhorn Rd. at Rolling Hills Way
2. E. Silberhorn Rd. at S. 7th Avenue

I have inspected the site and surrounding street system. The general format of this report is to describe the proposed project, identify existing traffic conditions (baseline), project future traffic conditions and identify Agency street/road improvements (future baseline), calculate the traffic that would be generated by the project and then add it to the future baseline traffic volumes. Operational analyses are used to determine the specific project traffic impact and appropriate traffic mitigation measures to reduce the impact.

The summary, conclusions and recommendations begin on page 10 of this report.

PROJECT INFORMATION

Figure 1 is a vicinity map which shows the location of the site and the surrounding Street system.

Figure 2 shows the Review Copy site plan prepared by Clark Land Office. The site plan shows 31 lots for SFDU Phase B development, open space, a 30' wide water easement (south portion of the site), a 20' wide utility easement (aligned with E. Quail Lane to the west) and

internal streets. Access to the project would be via the extension of Comfort Way and Rolling Hills Way into the subject site.

Full development and occupancy of the proposed Home Subdivision Phase B project is anticipated to occur by 2019/2020, presuming the permits are issued in a timely manner. However, to ensure a conservative analysis 2023 has been used as the horizon year.

EXISTING ENVIRONMENT

Project Site

An aerial image of the project site obtained from Clallam County GIS is depicted below.



The site currently is not developed

Street System

Figure 3 shows the existing traffic control, number of street lanes, number of approach lanes at intersections and other pertinent information. The primary streets within the study area

and their classifications per Figure 2 "Existing Street System with Planned Reclassifications" in the City of Sequim Transportation Master Plan, June 2013 are as follows:

➢ SR - 101	Principal Arterial
➢ Washington Street	Minor Arterial
➢ Rural Road	Collector
➢ S. 7th Avenue	Collector (proposed)

Below is Figure 2: from Transportation Master Plan:



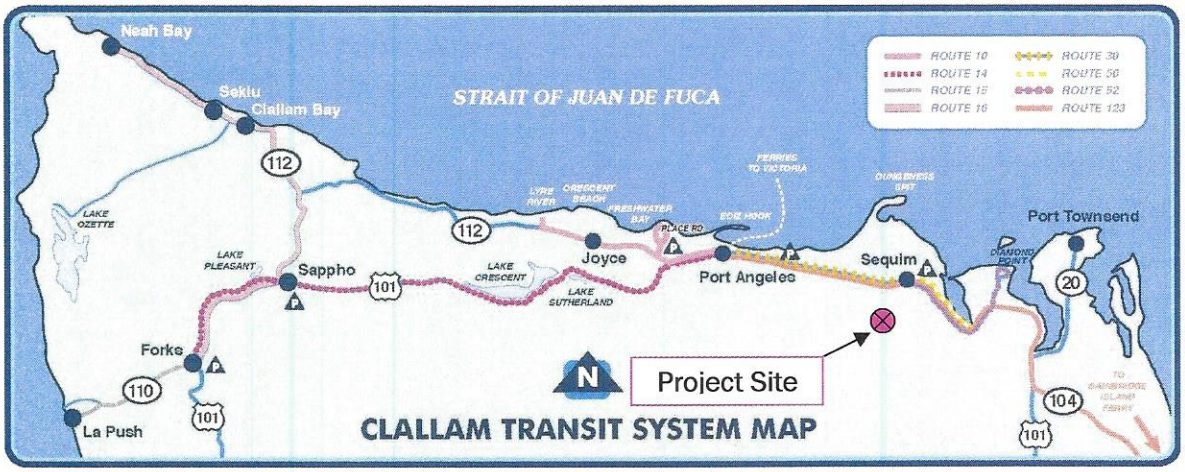
Pedestrian Facilities

Pedestrian sidewalks exist on the east side of Comfort Way, south side of Jara Way/Rolling Hills Way (north side at east end).

Alternative Transportation

I have reviewed the Clallam County Transit services website for bus services in the vicinity of the proposed development. The map below is the Clallam Transit System Map. Routes 30 and 40 serve W. Washington Street at S. Priest Road. Further information on transit service can be obtained from the website; http://www.clallamtransit.com/.





Schools

The Sequim School District online information indicates that students living in the Home Subdivision Phase B would attend the following schools:

Greywolf Elementary
School - Grades K-5
171 Carlsborg Rd,
Sequim, WA 98382
360-582-3300

Sequim Middle School
Grades 6-8
301 West Hendrickson
Sequim, WA 98382
360-582-3500

Sequim High School
Grades 9-12
601 North Sequim Avenue
Sequim, WA 98382
360-582-3600

Students attending the above schools would be eligible for bus transportation.

Traffic Volumes

Figure 4 shows the existing PM peak hour traffic volumes at the analysis streets and intersections. Traffic Count Consultants, a firm specializing in the collection of traffic data, conducted PM peak period turning movement counts at the study intersections. The count data sheets are attached in the appendix.

Intersection Operations

Traffic engineers have developed criteria for intersection operations called level of service (LOS). The LOS's are A to F with A and B being very good and E and F being more congested. LOS C and D correlate to busy traffic conditions with some restrictions to the ability to choose travel speed, change lanes and the general convenience comfort and safety.

The procedures in the Transportation Research Board Highway Capacity Manual, 2010 were used to calculate the level of service at the study intersections. The following table depicts the LOS and corresponding average delay in seconds at signalized and stop control intersections:

Intersection Type	Level of Service					
	A	B	C	D	E	F
Signalized	<10	>10 and <20	>20 and <35	>35 and <55	>55 and <80	>80
Stop Control	<10	>10 and <15	>15 and <25	>25 and <35	>35 and <50	>50

LOS Analysis Criteria

City of Sequim:

Policy 7 in the City of Sequim Transportation Master Plan, June 2013 identifies the intersection LOS standard as "D" with Washington Street allowed to operate at capacity in downtown core and at "E" outside of downtown: see right:

Policy 7: Develop a transportation system that achieves the following level of service (LOS) metrics:

Vehicular LOS: all City streets and intersections, except for Washington Street, are developed and maintained to provide a minimum of LOS D. Washington Street has a LOS F standard within downtown (5th to Brown) and must maintain a minimum of LOS E outside of downtown.

WSDOT:

I have reviewed the WSDOT website (www.wsdot.wa.gov) for Level of Service thresholds. The website contained the "Level of Service Thresholds for State Highways Set by RTPOs" which identifies LOS on State Highways for various Counties. The pertinent section of Level of Service Standards for State Highways January 1, 2010 for Clallam County is below:

Level of Service Standards for Washington State Highways
January 1, 2010

WSDOT sets level of service (LOS) standards for state highways and ferry routes of statewide significance (HSS) based on RCW 47.06.140(2). Regional transportation planning organizations (RTPOs) and WSDOT jointly develop and RTPOs establish LOS standards for regionally significant state highways and ferry routes (non-HSS) based on RCW 47.80.030(1)(c). LOS is based on peak-hour except where noted.

Regional Organization/County	LOS for Non-HSS		LOS for HSS	
	Urban	Rural	Urban	Rural
(PRTPO) Peninsula - RTPO				
Mason County	D	C	D	C
Jefferson County	D	C	D	C
Clallam County	D	C	D	C
Kitsap County[1]	(see PSRC above)		D	C

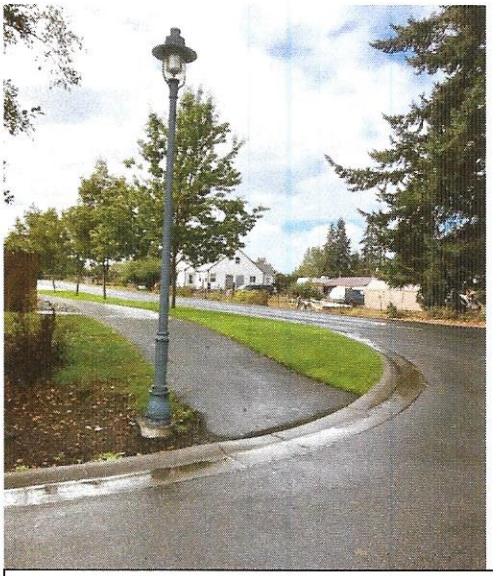
The WSDOT LOS threshold for urban portions of Clallam County is identified at LOS 'D'.

LOS Analysis Software

The LOS of the study intersections were calculated using the Synchro software program. Table 1, at the end of the report prior to Figures, shows the existing LOS operations of the study intersections. The study intersections are operating at LOS 'B' and better that meet City criteria.

Incident/Safety History

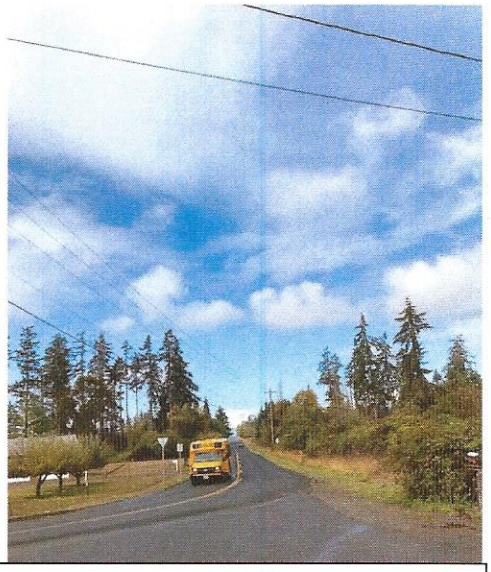
Photographs at the study intersection are depicted below:





E. Silberhorn Way at Rolling Hills Way – looking west and east, respectively





E. Silberhorn Way at S. 7th Ave. – looking west and north, respectively

Incident data was reviewed using the WSDOT accident data portal available online at https://remoteapps.wsdot.wa.gov/highwaysafety/collision/data/portal/public/. This portal was used to review incidents in the site vicinity for the years 2015 to 2017. The WSDOT data is attached.

Inspection of the data indicated two property damage incidents at/in the vicinity of the S. 7th Street at E. Silberhorn Road intersection, one in 2016 and one in 2017. The study intersections have good sight lines and operate satisfactorily with no apparent issue.

STREET IMPROVEMENT PROJECTS

Sequim

I have reviewed the City of Sequim's Exhibit A 2018 – 2023 Transportation Improvement Program, copy attached. The City TIP indicates a project to sidewalks on S. 7th Street from Comfort Way to McCurdy Road, TIP #8.

WSDOT

Review of the WSDOT website indicated no projects on SR's near the site.

HORIZON YEAR CONDITIONS "WITHOUT" THE PROJECT

Figure 5 shows the projected 2023 PM peak hour traffic volumes "without" the project. These volumes include the existing traffic volume counts plus background growth. The traffic growth per WSDOT Annual Traffic Report data on SR – 101 at MP 265 after ramp Sequim

Avenue, copy attached, is about 1.6% per year. In order to ensure a conservative analysis a 2% per year growth factor is used.

TRIP GENERATION AND DISTRIBUTION

Definitions

A vehicle trip is defined as a single or one direction vehicle movement with either the origin or destination (exiting or entering) inside the proposed development.

Traffic generated by development projects consists of the following types:

Pass-By Trips:	Trips made as intermediate stops on the way from an origin to a primary trip destination.
Diverted Link Trips:	Trips attracted from the traffic volume on a roadway within the vicinity of the generator but which require a diversion from that roadway to another roadway in order to gain access to the site.
Captured Trips:	Site trips shared by more than one land use in a multi-use development.
Primary (New) Trips:	Trips made for the specific purpose of using the services of the project.

Trip Generation

The proposed Home Subdivision Phase B project is expected to generate the vehicular trips during the average weekday, street traffic AM and PM street peak hours as shown in Table 2. The trip generation for the project is calculated using trip rates from the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, for Single-Family Detached Housing (ITE Land Use Code 210). All site trips made by all vehicles for all purposes, including commuter, visitor, and service and delivery vehicle trips are included in the trip generation values.

TABLE 2 - VEHICULAR TRIP GENERATION
HOME SUBDIVISION PHASE B - SEQUIM
TRAFFIC IMPACT ANALYSIS

Time Period	Size	TG Rate (X)	Enter %	Enter Trips	Exit %	Exit Trips	Total (T)
PROPOSED: Single Family Detached Housing (ITE LUC 210: 31 - SFDU)							
Weekday	31	9.44	50%	146.3	50%	146.3	292.6
AM peak hour	31	0.74	25%	5.7	75%	17.2	22.9
PM peak hour	31	0.99	63%	19.3	37%	11.4	30.7

T = trips, X = number of lots/units

The traffic associated with the Home Subdivision Phase B is projected at 31 weekday PM peak hour trips.

Trip Distribution

Figure 6 shows the site generated traffic assigned to the street system. Trips to and from the site were distributed to the surrounding road network based on the characteristics of the network, existing traffic volume patterns and the location of likely trip origins and destinations (residential, business, shopping (comparison shoppers), social and recreational opportunities).

HORIZON YEAR CONDITIONS "WITH" THE PROJECT

Traffic Volumes

Figure 7 shows the projected 2023 PM peak hour traffic volumes "with" the proposed project at the analysis and site access intersections. The site generated peak hour traffic volumes shown on Figure 6 were added to the projected background traffic volumes shown on Figure 5 to obtain the Figure 7 volumes.

Level of Service

Table 1 shows the calculated LOS for the horizon year (2023) "with" and "without" project conditions at the analysis intersections. Based on my operational analysis the analyzed intersections would operate at LOS 'B' or better "with" the project conditions that meets the City criteria.

Site Access

Access to the project would be via the extension of Comfort Way and Rolling Hills Way into the subject site. Via Traffic Engineering inspection the site accesses would operate at good level of service.

AGENCY TRAFFIC IMPACT MITIGATION REQUIREMENTS

Sequim Municipal Code **22.04.110 Transportation impact fee** identifies a TIF rate of $2,491 per Single Family (detached) outside the downtown area; inside the downtown core the rate is $2,020. The City's Transportation Impact Fee Program for Sequim, Washington 2013 Update dated September 2013 provides the technical document regarding the TIF program. City Table 4 of this report, pertinent portion below, identifies a TIF of $2,491 per SFDU and as noted in the City's Municipal Code:

Table 4. Impact Fee Schedule Components

Land Use	ITE Land Use Code	Unit of Measure	Basic Trip Rate Trips/Unit (A)	New Trip % (B)	New Trip Rate	Avg. Trip Length (miles)	Trip Length Adjustment Factor (C)	Impact Fee Rate
						Avg=1.8		Cost per Trip End = $2,244
Residential								
Single Family (Detached)	210	dwelling	1.00	100%	1.00	2.0	1.11	$2,491

The City SFDU fee is based on the 9th Edition of the Trip Generation; subsequently the 10th Edition has been published. The new report slightly refines the trip generation rate for SFDU during the PM peak hour. Table 3 below provides my TIF estimate for the project making the minor adjustment to reflect new data.

TABLE 3 - TRAFFIC IMPACT FEE
HOME SUBDIVISION PHASE B - SEQUIM
TRAFFIC IMPACT ANALYSIS

Use	Units	City TIF/rate*	Estimated TIF	City	ITE	Refined TIF
SFDU	31	$ 2,491.00	$ 77,221	1.00	0.99	$ 76,449

Rate per SMC 22.04.110 Transportation impact fee, available online 08.28.2018
The fee schedule notes a rate per PM peak hour trip of $2,244

A TIF of $76,449 is calculated, per the Trip Generation 10th Edition data, for the 31 lot project ($2,466.08 per SFDU).

The City will require that the project site access and circulation be constructed in conformance to City requirements.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This report analyzed the traffic impact for the 31 lot Home Subdivision Phase B SFDU residential project generally located between South 7th Avenue and Rolling Hills Way and south of Jara Place in the City of Sequim. Access to the project would be via the extension of Comfort Way and Rolling Hills Way into the subject site.

Existing traffic data was obtained at the street intersections identified for analysis. Future horizon year traffic volumes were derived using a conservative growth factor of two percent per year. Level of service analyses were performed for existing and projected future horizon traffic volumes during the weekday PM peak hour. The evaluation of the traffic impact of the proposed project included adding project generated traffic to the future traffic volume projections and calculating the level of service. The "with" project traffic operations were then compared to the "without" project operations. The comparison of traffic operations "with" and "without" the project identified that the project would not cause a significant

adverse affect on the operation of the study intersections. In addition, sight lines and safety inspection were conducted at the study intersections and no apparent deficiencies were noted.

Based on my analysis I recommend that Home Subdivision Phase B be allowed with the following traffic impact mitigation measures.

- Construct site in accordance with applicable City requirements.
- Pay lawful Traffic Impact Fee.

If you have any questions you can contact me at 206.762.1978 or email me at jaketraffic@comcast.com.



Very truly yours,

Mark J. Jacobs, PE, PTOE, President
JAKE TRAFFIC ENGINEERING, INC.

10.04.2018

MJJ: mjj

TABLE 1 - PM PEAK HOUR LEVEL OF SERVICE
HOME SUBDIVISION PHASE B - SEQUIM
TRAFFIC IMPACT ANALYSIS

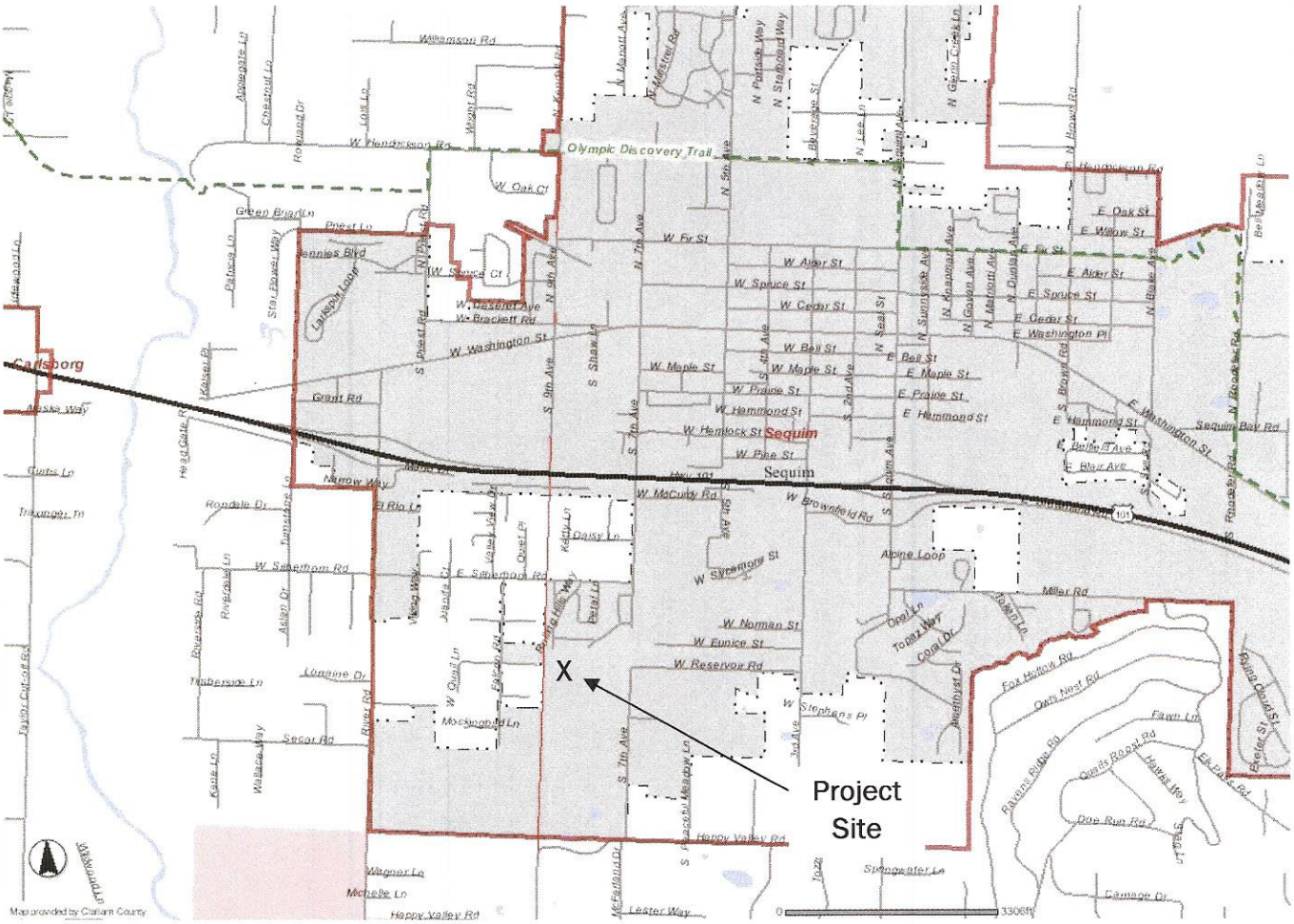
INTERSECTION	APPROACH	EXISTING	2023 W/O PROJECT	2023 W/ PROJECT
1. E. Silberhorn Rd. at Rolling Hills Way	Overall EB	A (0.6) A (9.6)	A (0.6) A (9.7)	A (0.8) A (9.9))
2. E. Silberhorn Rd. at S. 7th Avenue	Overall NB	A (7.2) B (10.2)	A (7.4) B (10.5)	A (7.6) B (10.6)
3. Site Access via extension of Comfort Way and Rolling Hills Way	Overall	–	–	A*

* LOS determined via Traffic Engineering Inspection.

Number shown in parenthesis is the average control delay in seconds per vehicle for the intersection as a whole or approach movement, which determines the LOS per the Highway Capacity Manual.

Project: Home Subdivision Phase B - Sequim
Location: South of Jara Place between South 7th Avenue and Rolling Hills Way

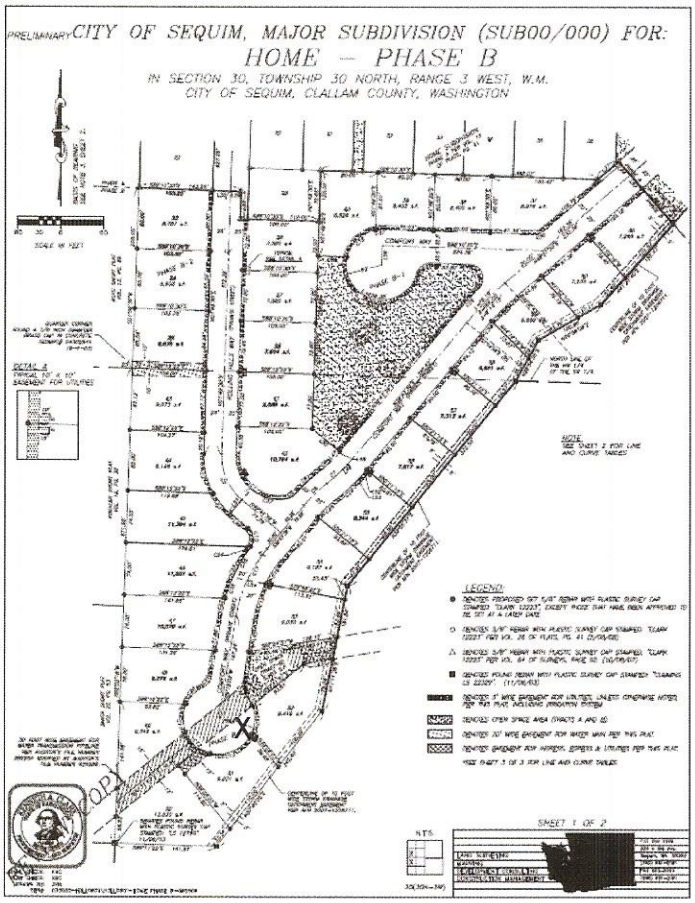
NORTH



JTE, Inc. FIGURE 1 **Reprint in Color Only**	HOME SUBDIVISION PHASE B - SEQUIM TRAFFIC IMPACT ANALYSIS
	VICINITY MAP

Project: Home Subdivision Phase B - Sequim
Location: South of Jara Place between South 7th Avenue and Rolling Hills Way

NORTH



Note: A 8.5 x 11" copy of the Site Plan is included with this report

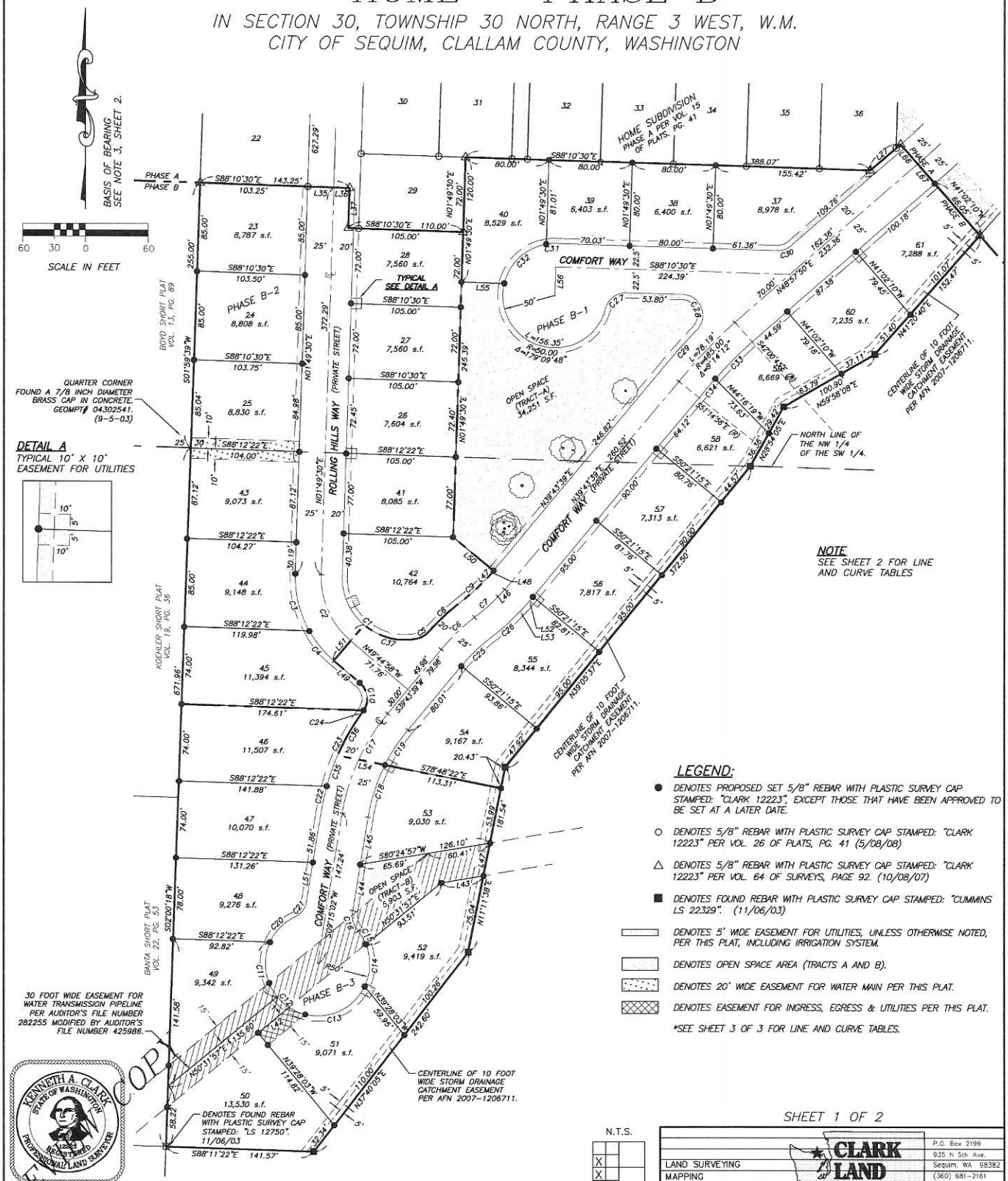
JTE, Inc. FIGURE 2 **Reprint in Color Only**	HOME SUBDIVISION PHASE B - SEQUIM TRAFFIC IMPACT ANALYSIS
	PLELIMINARY SITE PLAN

PRELIMINARY

CITY OF SEQUIM, MAJOR SUBDIVISION (SUB00/000) FOR:

HOME – PHASE B

IN SECTION 30, TOWNSHIP 30 NORTH, RANGE 3 WEST, W.M.
CITY OF SEQUIM, CLALLAM COUNTY, WASHINGTON



NOTE
SEE SHEET 2 FOR LINE AND CURVE TABLES

LEGEND:

- ● DENOTES PROPOSED SET 5/8" REBAR WITH PLASTIC SURVEY CAP STAMPED: "CLARK 12223", EXCEPT THOSE THAT HAVE BEEN APPROVED TO BE SET AT A LATER DATE.
- ○ DENOTES 5/8" REBAR WITH PLASTIC SURVEY CAP STAMPED: "CLARK 12223" PER VOL. 26 OF PLATS, PG. 41 (5/08/08)
- △ DENOTES 5/8" REBAR WITH PLASTIC SURVEY CAP STAMPED: "CLARK 12223" PER VOL. 64 OF SURVEYS, PAGE 92. (10/08/07)
- ■ DENOTES FOUND REBAR WITH PLASTIC SURVEY CAP STAMPED: "CUMMINS LS 22329". (11/06/03)
- DENOTES 5' WIDE EASEMENT FOR UTILITIES, UNLESS OTHERWISE NOTED, PER THIS PLAT, INCLUDING IRRIGATION SYSTEM.
- DENOTES OPEN SPACE AREA (TRACTS A AND B).
- DENOTES 20' WIDE EASEMENT FOR WATER MAIN PER THIS PLAT.
- DENOTES EASEMENT FOR INGRESS, EGRESS & UTILITIES PER THIS PLAT.

*SEE SHEET 3 OF 3 FOR LINE AND CURVE TABLES.

FINAL CHECK: KAC
2ND CHECK: SBC
DRAWN BY: JKB
SER#: 033030-H3LL0801\H3LL0801-HOME PHASE B-080508

N.T.S.

30(30N-3W)

SHEET 1 OF 2

CLARK LAND OFFICE
P.O. Box 2199
935 N 5th Ave.
Sequim, WA 98382
LAND SURVEYING
MAPPING
DEVELOPMENT CONSULTING
CONSTRUCTION MANAGEMENT
(360) 681-2161
FAX 683-5310
(888) 681-2161

VOL. ___ PG. ___

PRELIMINARY

CITY OF SEQUIM, MAJOR SUBDIVISION (SUB00/000) FOR:

HOME – PHASE B

IN SECTION 30, TOWNSHIP 30 NORTH, RANGE 3 WEST, W.M.
CITY OF SEQUIM, CLALLAM COUNTY, WASHINGTON

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	107.96	60.00	103°05'56"
C2	72.01	80.00	51°34'28"
C3	57.65	105.00	31°27'37"
C4	36.86	105.00	20°06'51"
C5	13.15	20.00	37°41'03"
C6	44.44	200.00	12°43'51"
C7	30.00	200.00	8°35'40"
C8	43.84	220.00	11°24'59"
C9	27.00	180.00	8°35'40"
C10	29.14	20.00	83°29'39"
C11	55.69	50.00	63°48'37"
C12	15.23	50.00	17°27'27"
C13	84.98	50.00	97°22'46"
C14	41.63	50.00	47°42'19"
C15	14.77	50.00	16°55'46"
C16	21.03	25.00	48°11'23"
C17	106.38	200.00	30°28'37"
C18	52.89	175.00	17°19'04"
C19	40.19	175.00	13°09'33"
C20	34.96	50.00	40°03'28"
C21	19.25	20.00	55°09'00"
C22	22.97	220.00	5°59'00"
C23	80.62	220.00	20°59'47"
C24	0.87	20.00	2°29'08"
C25	38.88	175.00	12°43'51"
C26	33.75	225.00	8°35'40"
C27	27.10	20.00	77°37'35"
C28	46.27	20.00	132°32'22"
C29	49.30	505.00	5°35'38"
C30	14.96	20.00	42°51'40"
C31	10.04	50.00	11°30'26"
C32	58.43	50.00	66°57'21"
C33	49.97	460.00	6°13'28"
C34	23.97	460.00	2°59'10"
C35	31.24	220.00	8°08'06"
C36	49.38	220.00	12°51'41"
C37	53.88	60.00	51°27'09"

LINE TABLE		
LINE	LENGTH	BEARING
L35	25.00	S88°10'30"E
L36	15.00	S88°10'30"E
L37	38.47	S01°49'30"W
L42	38.54	N50°31'57"E
L43	41.02	N80°24'57"E
L46	9.53	S43°51'50"W
L47	32.09	S11°11'38"W
L48	7.07	N39°43'39"E
L49	32.61	N49°44'58"W
L50	50.35	S50°21'15"E
L51	45.00	N40°27'58"E
L52	12.73	N39°43'39"E
L53	10.43	S43°51'50"W
L54	46.31	S78°48'22"E
L55	40.98	S88°10'30"E
L56	27.50	N01°49'30"E
L66	25.00	S41°02'10"E
L67	25.00	S41°02'10"E

NOTES:

1. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE METHODS USING A 3 SECOND TOPCON GTS-313 TOTAL STATION AND STEEL TAPE.
2. FOR SECTION SUBDIVISION DATA, SEE VOL. 39 OF SURVEYS, PAGE 86, RECORDS OF CLALLAM COUNTY, WASHINGTON.
3. THE BASIS OF BEARING FOR THIS SURVEY IS THE WASHINGTON COORDINATE SYSTEM GRID, NORTH ZONE, 1983 DATUM, 1991 ADJUSTMENT (WCS GRID) BASED ON FIELD TIES TO CONTROL POINTS GEOMPT#04302541 AND GEOMPT#03303031 AS SHOWN ON SURVEY RECORDED IN VOLUME 39 OF SURVEYS, PAGE 86. ALL DISTANCES SHOWN HEREON ARE REDUCED TO SAID GRID, A COMBINED SCALE FACTOR OF 0.99993003 AT GEOMPT#04302541 WAS USED FOR THIS SURVEY.
4. THIS SURVEY WAS PERFORMED ACCORDING TO WAC 332-130-090 STANDARDS FOR LAND BOUNDARY SURVEYS. THIS SURVEY WAS NOT PERFORMED OR CERTIFIED TO MEET THE CURRENT "MINIMUM STANDARD REQUIREMENTS" OR "ACCURACY STANDARDS" FOR ALTA/ACSM LAND TITLE SURVEYS.

VOL. ____ PG. ____

KENNETH A. CLARK
STATE OF WASHINGTON
22283
REGISTERED
PROFESSIONAL LAND SURVEYOR

COPY

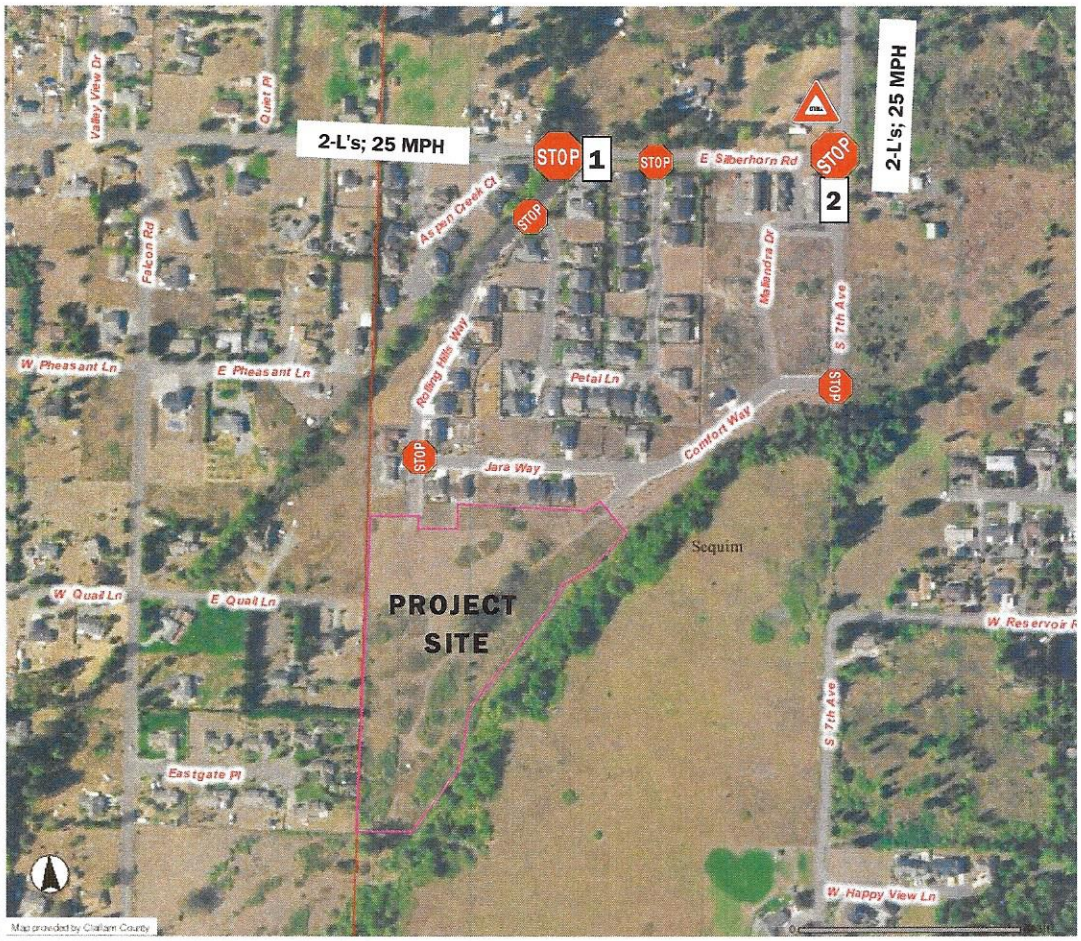
FINAL CHECK: KAC
2ND CHECK: SBC
DRAWN BY: JKB
SER#: 033030-H3LL0801\H3LL0801-HOME PHASE B-080508

SHEET 2 OF 2

N.T.S.

30(30N-3W)

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LAND SURVEYING
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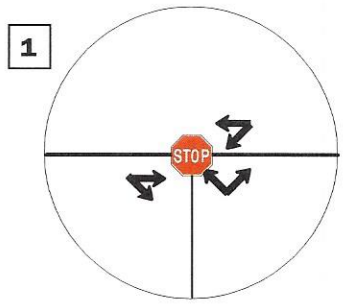


NORTH

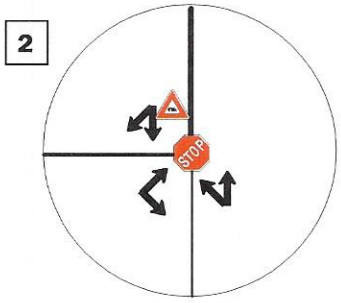
LEGEND

- Approach Lane & Direction
- STOP — Stop Sign
- Yield Sign
- [x] — Analysis I/S #
- X-L's — # of Travel Lanes
- XX MPH — Posted Speed Limit

Image obtained from Clallam County GIS

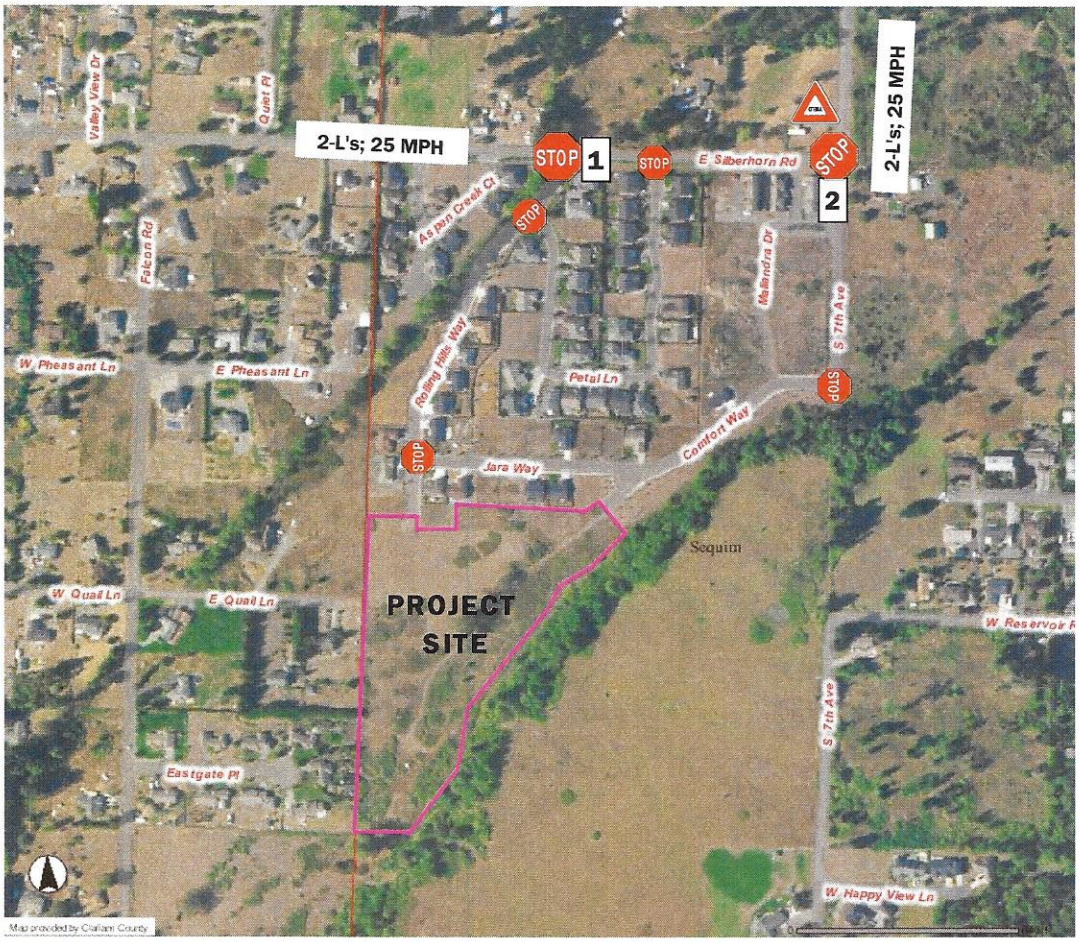


E Silberhorn Road at Rolling Hills Way



E Silberhorn Road at S. 7th Avenue

JTE, Inc. FIGURE 3 Reprint in Color Only	HOME SUBDIVISION PHASE B - SEQUIM TRAFFIC IMPACT ANALYSIS EXISTING STREET CONDITIONS

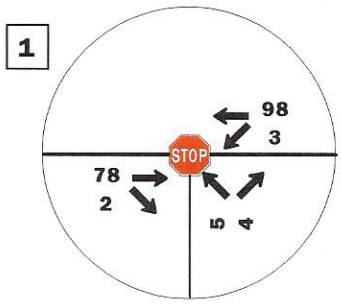


NORTH

LEGEND

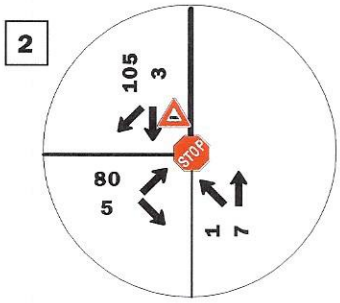
- PM Peak Hour Traffic & Direction
- STOP — Stop Sign
- Yield Sign
- [x] — Analysis I/S #
- X-L's — # of Travel Lanes
- XX MPH — Posted Speed Limit

Image obtained from Clallam County GIS



E Silberhorn Road at Rolling Hills Way

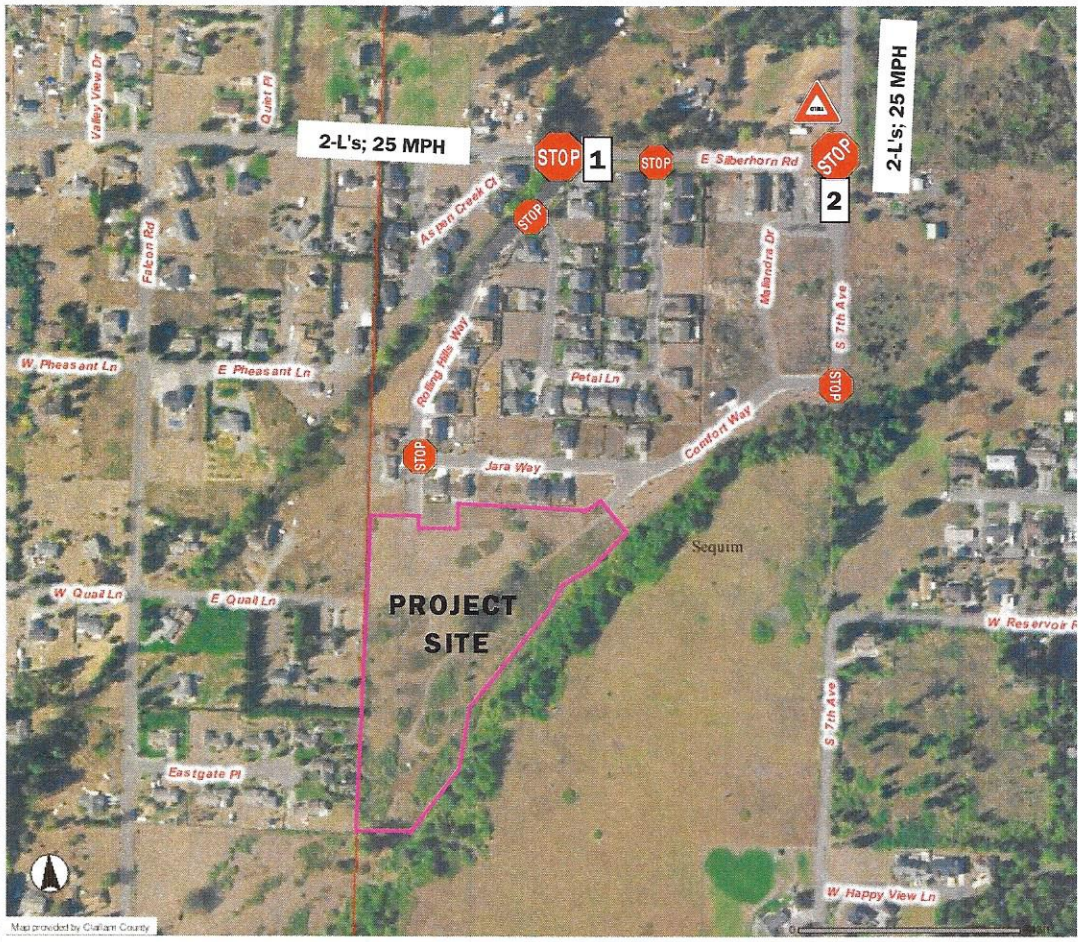
Wednesday 09.12.2018
1645 - 1745



E Silberhorn Road at S. 7th Avenue

Wednesday 09.12.2018
1645 - 1745

JTE, Inc. FIGURE 4 Reprint in Color Only	HOME SUBDIVISION PHASE B - SEQUIM TRAFFIC IMPACT ANALYSIS EXISTING PM PEAK HOUR TRAFFIC VOLUMES



NORTH

LEGEND

PM Peak Hour Traffic & Direction

STOP Stop Sign

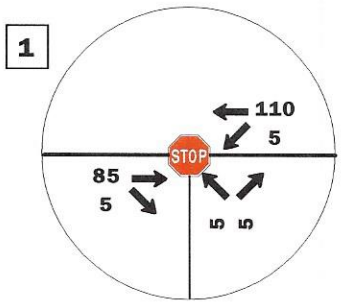
Yield Sign

X Analysis I/S #

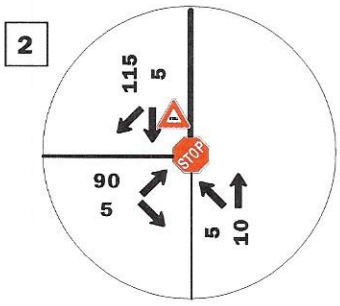
X-L's # of Travel Lanes

XX MPH Posted Speed Limit

Image obtained from Clallam County GIS



E Silberhorn Road at Rolling Hills Way



E Silberhorn Road at S. 7th Avenue

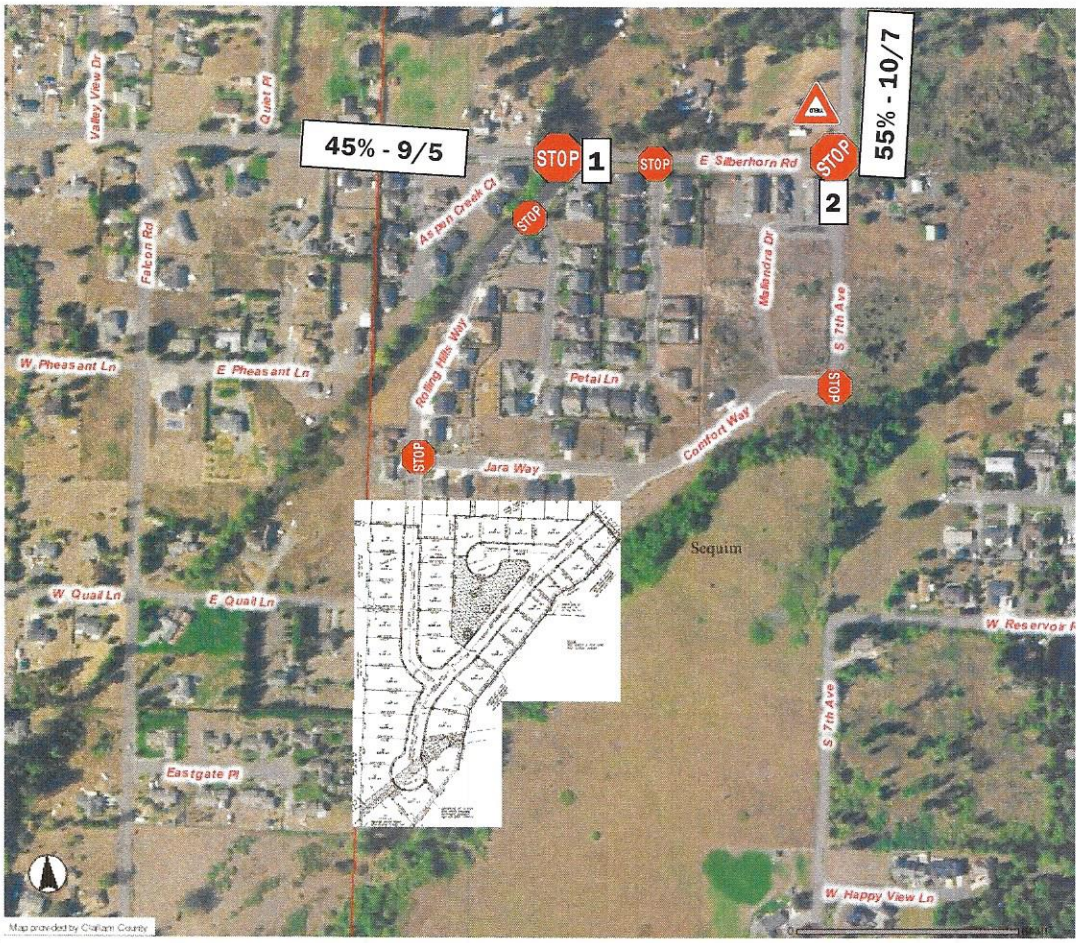
JTE, Inc.

FIGURE 5

Reprint in Color Only

HOME SUBDIVISION PHASE B - SEQUIM
TRAFFIC IMPACT ANALYSIS

PROJECTED 2023 PM PEAK HOUR TRAFFIC VOLUMES
WITHOUT THE PROJECT

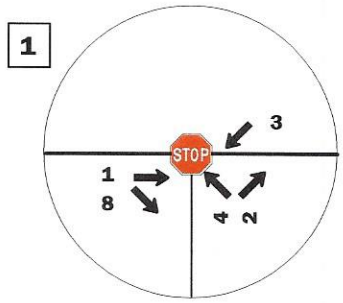


NORTH

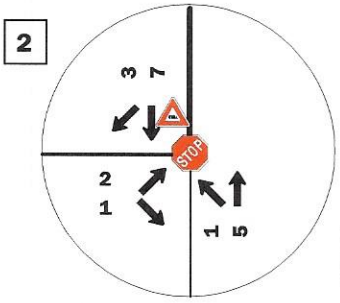
LEGEND

- PM Peak Hour Traffic & Direction
- STOP — Stop Sign
- Yield Sign
- [x] — Analysis I/S #

Image obtained from Clallam County GIS



E Silberhorn Road at Rolling Hills Way



E Silberhorn Road at S. 7th Avenue

PM Peak Hour Traffic

Entering:	19
Exiting:	12

XX% Distribution - Enter/Exit Peak Hour Trips

JTE, Inc.

FIGURE 6

Reprint in Color Only

HOME SUBDIVISION PHASE B - SEQUIM TRAFFIC IMPACT ANALYSIS

PROJECT GENERATED PM PEAK HOUR TRAFFIC VOLUMES AND DISTRIBUTION

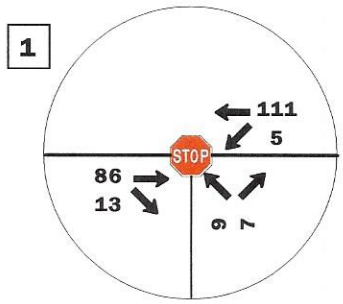


NORTH

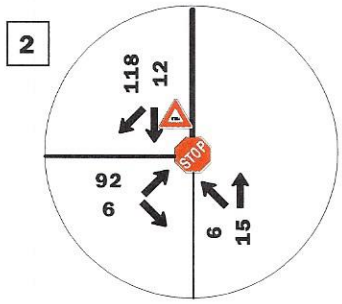
LEGEND

- PM Peak Hour Traffic & Direction
- STOP — Stop Sign
- Yield Sign
- [X] — Analysis I/S #
- X-L's — # of Travel Lanes
- XX MPH — Posted Speed Limit

Image obtained from Clallam County GIS



E Silberhorn Road at Rolling Hills Way



E Silberhorn Road at S. 7th Avenue

JTE, Inc.

FIGURE 7

Reprint in Color Only

HOME SUBDIVISION PHASE B - SEQUIM
TRAFFIC IMPACT ANALYSIS

PROJECTED 2023 PM PEAK HOUR TRAFFIC VOLUMES WITH THE PROJECT

APPENDIX

CITY OF
SEQUIM

[illegible]

TO: Bruce Emery
Chris Jackson
Dennis Yakovich

FROM: City of Sequim
Department of Community Development

DATE: April 13, 2018

SUBJECT: PRE18-003
Proposed "Home Phase B" Subdivision
Parcel Number 033030-590000

The following comments are intended to help guide the applicant through the land division process to obtain preliminary Subdivision approval. Comments will be listed according to the appropriate city entity.

Project Background: Proposed preliminary Subdivision application to develop 31 residential lots on approximately 9.14 acres (gross) of "Single Family Residence" (R4-8) zoned property located south and west of the intersection between South 7th Avenue and E. Silberhorn Road. The subject property was previously identified as "Phase B" of the original "Home" subdivision, which was reviewed and approved under City of Sequim land division case number SUB06/004. Phase A of the "Home" subdivision received final plat approval and was recorded with the Clallam County Auditor's office under Volume 15, Page 41 of Plats on February 13, 2008. Phase B was never completed, and is therefore the vacant "stand-alone" parcel subject to this proposal.

Meeting Attendees:

Applicant Representatives:

Dennis Yakovich
Chris Jackson

Fire District 3 Staff:

Steve Jackson, Fire Code Technician

City Staff:

Barry Berezowsky, Community Development Manager
Dave Nakagawara, Project Engineer
Gary Dougherty, Assistant Planner
Ann Hall, Building Official / Fire Marshal

Comments:

Public Works/Engineering Department:

- An updated traffic impact analysis will be required for this development to include impacts from new developments entitled and built since the original phase.

- New streets shall be built to public standards. Check underlying easements of existing roads in adjacent phase to ensure that continuity of access to public streets (Silberhorn, 7th Avenue).

- There are known water pressure issues (insufficient pressures) in Jara Way (approximately 30 psi at the meter), adjacent to this phase. A hydraulic analysis will be required for both water and sewer.

- Water - Water infrastructure plans will be reviewed by a third-party (peer review). Mains are located 10 feet northerly or easterly of street centerline per the city development design standards.

- Sewer - Sewer infrastructure plans will be reviewed by a third-party (peer review). Sewer mains shall run parallel to and 5 feet southerly or westerly of street centerline where possible. The sewer main shall maintain a minimum 10 foot horizontal separation from the proposed or existing water mains.

- Fire Hydrant locations shall be in accordance with Appendix C of the 2015 International Fire Code.

- Stormwater: Improvements shall comply with the provisions of the 2014 Stormwater Management Manual for Western Washington, 2014 edition. Minimum Requirements #1 – 9 will apply to the development. Provide a geotechnical analysis as well for this project phase.

- Transportation Impact Fees, Parks Impact fees and Sewer and Water General Facilities charges will be collected at the time of building permit issuance for each lot.

Planning Department:

The applicant will need to submit a Major Preliminary Subdivision application with associated $1375 fee (SMC 3.68.030(F)). The application packet can be found on the City's website at: http://www.sequimwa.gov/DocumentCenter/Home/View/1213

The preliminary subdivision application will be processed as a Type C-2 Development Permit Application (SMC 20.01.010), which requires public notice, a neighborhood community meeting, a public meeting before the Sequim Planning Commission, and an open record public hearing before the Sequim City Council.

The review process for Type C-2 development permit applications is provided in Title 20 LAND USE AND DEVELOPMENT and Title 16 ENVIRONMENT. The following, is a general summary of the procedure:

1) Subdivision application and SEPA environmental checklist is submitted to the City for review.

2) Staff reviews the submitted materials for completeness and issues a notice of *complete*, or *incomplete* application within 28 days of receipt.

3) Applicant must host a neighborhood meeting, per SMC 20.01.100.

4) Notice of Application (possibly combined with Notice of Public Hearing) is published in the Peninsula Daily News, posted on the property and mailed to property owners within 300 feet of the subject property. (The applicant must provide stamped, addressed envelopes with the list of property owners within 300 feet of the subject property.) The applicant is responsible for the cost of notice.

5) A public meeting will be scheduled for the City of Sequim Planning Commission (meetings held twice per month). The Planning Commission will make a recommendation to the City Council, who will make the final decision on the application.

6) After the Planning Commission meeting, a Public Hearing is scheduled for the City Council (meets twice per month).

7) Per SMC 20.01.230, a final decision on the subdivision application shall be made within 120 days after the date of the *determination of completeness* (excluding any time periods where the City has requested additional information).

- SEPA Environmental Review is required as part of the preliminary Subdivision review process (WAC 197-11-800). An environmental checklist will need to be completed and submitted with the required fee. The environmental checklist form can be found on the City's website at: http://www.sequimwa.gov/DocumentCenter/View/3947. The fee for this review is based on the project value, per SMC 3.68.030(F):

$0 – $250,000 =	$600
$250,000 – $500,000 =	$825
$500,000 – $1,000,000 =	$1,540
$1,000,000 + =	$2,645

- This property is located within the Highland Irrigation District. As required by RCW 58.17.310, the Highland Irrigation District will be contacted as part of the application review process to ensure that provision is made for irrigation right-of-way.

- During the meeting, staff indicated that there would likely be a recommendation for right-of-way between lots 25 and 43, in order to provide for future connectivity to the west.

- As discussed during the meeting, the embankment along the east boundary of the subject property may meet the classification criteria of a "Landslide Hazard Area" per SMC 18.80.030. Although this slope does not appear to be part of the subject property, SMC 18.80.040(D) provides that the critical areas protection standards also apply to lots or parcels that are adjacent to critical areas. An evaluation of this slope feature prepared by a civil engineer, or professional geologist will be required as part of the preliminary application submittal, as required by SMC 18.80.060.

- Street trees and lighting will be required along the internal road network. Conditions for street trees and street lights will likely be similar to those installed in the "Home – Phase A" subdivision.

If you have any questions, feel free to contact me.

Gary Dougherty

Gary Dougherty
Assistant Planner
gdougherty@sequimwa.gov
(360) 582-2459

Prepared for: **Jake Traffic Engineering, Inc.**

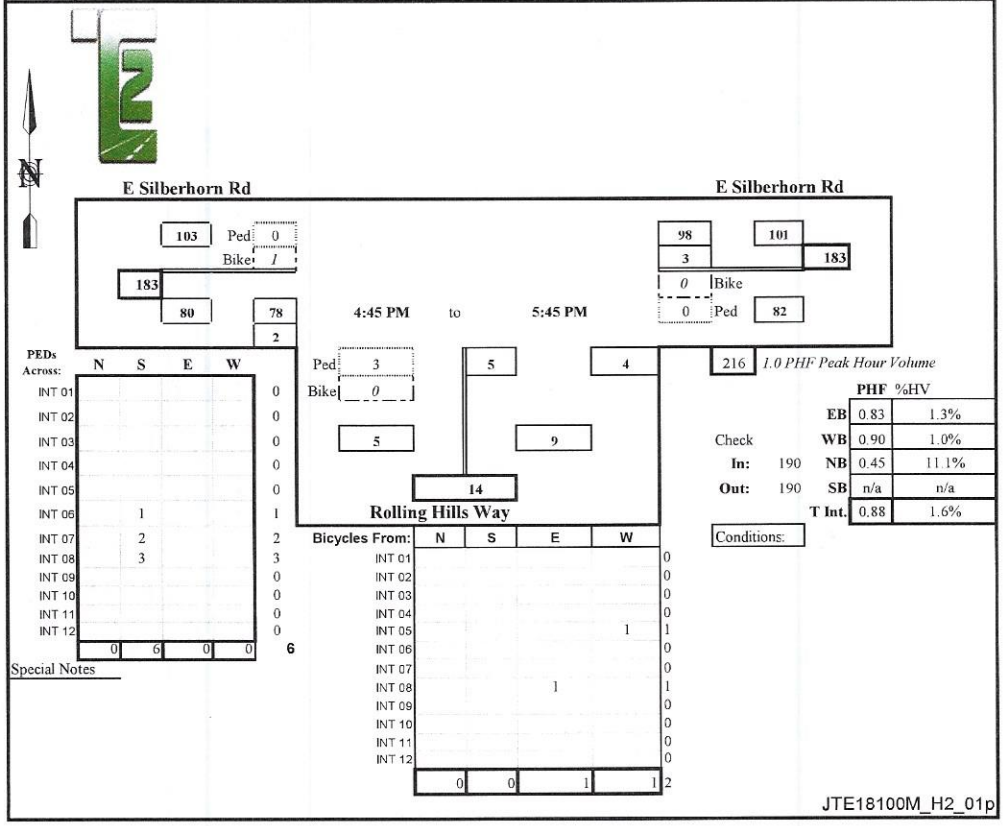
Traffic Count Consultants, Inc.

Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Rolling Hills Way & E Silberhorn Rd
Location: Sequim, Washington
Date of Count: Wed 9/12/2018
Checked By: Jess

Time Interval	From North on (SB) 0				From South on (NB) Rolling Hills Way				From East on (WB) E Silberhorn Rd				From West on (EB) E Silberhorn Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	0	0	0	0	0	0	1	0	0	24	0	0	0	15	2	42
4:30 P	0	0	0	0	0	1	0	0	1	0	29	0	1	0	14	1	45
4:45 P	0	0	0	0	0	4	0	1	0	0	22	0	0	0	17	1	45
5:00 P	0	0	0	0	0	2	0	3	0	0	24	0	0	0	22	0	51
5:15 P	0	0	0	0	0	0	0	1	1	0	25	0	0	0	17	0	43
5:30 P	0	0	0	0	0	1	0	0	0	2	22	0	1	0	15	2	42
5:45 P	0	0	0	0	1	2	0	0	0	1	27	0	0	0	24	0	54
6:00 P	0	0	0	0	0	0	0	0	0	0	21	0	0	0	15	2	38
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	1	10	0	6	2	3	194	0	2	0	139	8	360
Peak Hour: 4:45 PM to 5:45 PM																	
Total	0	0	0	0	1	5	0	4	1	3	98	0	1	0	78	2	190
Approach	0				9				101				80				190
%HV	n/a				11.1%				1.0%				1.3%				1.6%
PHF	n/a				0.45				0.90				0.83				0.88



(2)

Prepared for: **Jake Traffic Engineering, Inc.**

Traffic Count Consultants, Inc.

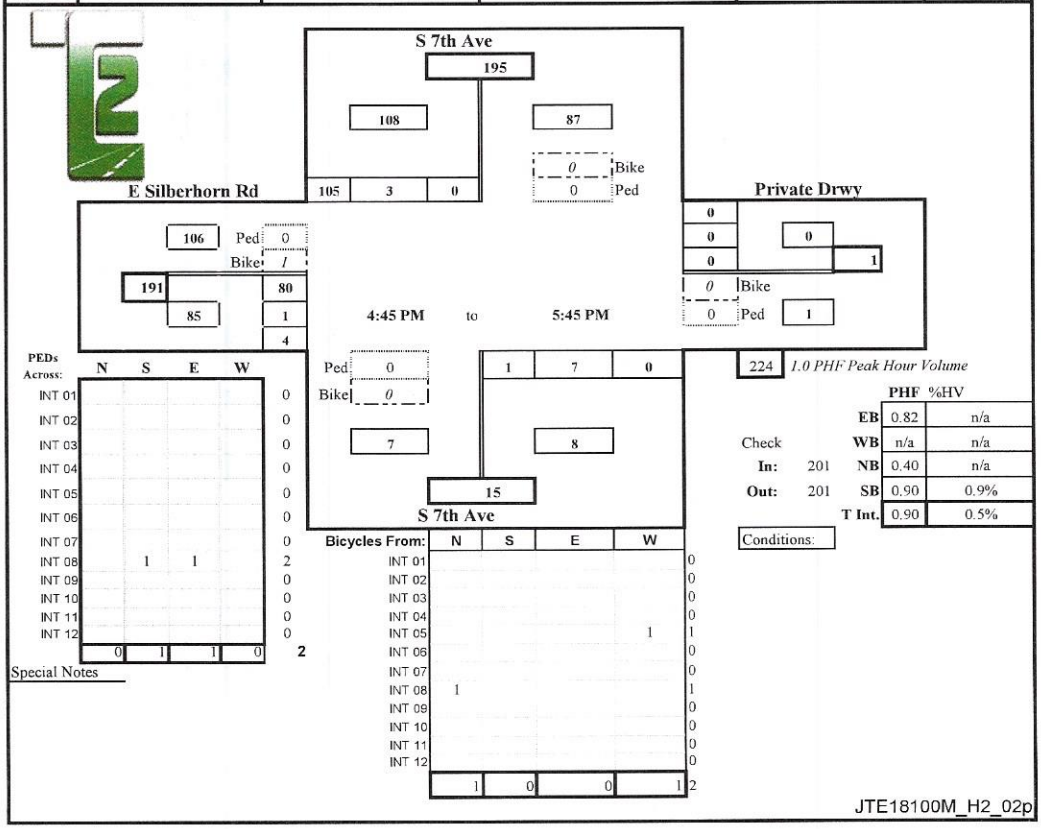
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: S 7th Ave & E Silberhorn Rd **Date of Count:** Wed 9/12/2018

Location: Sequim, Washington **Checked By:** Jess

Time Interval	From North on (SB) S 7th Ave				From South on (NB) S 7th Ave				From East on (WB) Private Drwy				From West on (EB) E Silberhorn Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	0	2	27	0	0	0	0	0	0	0	0	0	16	0	0	45
4:30 P	0	0	2	26	0	1	1	0	0	0	0	0	0	15	0	1	46
4:45 P	0	0	4	21	0	0	1	0	0	0	0	0	1	17	0	0	43
5:00 P	0	0	1	25	0	1	4	0	0	0	0	0	0	24	0	1	56
5:15 P	1	0	1	29	0	0	1	0	0	0	0	0	0	17	0	0	48
5:30 P	0	0	1	24	0	0	1	0	0	0	0	0	0	17	0	0	43
5:45 P	0	0	0	27	0	0	1	0	0	0	0	0	0	22	1	3	54
6:00 P	0	0	2	23	0	0	1	0	0	0	0	0	0	17	0	0	43
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	1	0	13	202	0	2	10	0	0	0	0	0	1	145	1	5	378
Peak Hour: 4:45 PM to 5:45 PM																	
Total	1	0	3	105	0	1	7	0	0	0	0	0	0	80	1	4	201
Approach	108				8				0				85				201
%HV	0.9%				n/a				n/a				n/a				0.5%
PHF	0.90				0.40				n/a				0.82				0.90



JTE18100M_H2_02p

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	78	2	3	98	5	4
Future Vol, veh/h	78	2	3	98	5	4
Conflicting Peds, #/hr	0	20	20	0	20	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	2	3	107	5	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	107	0	239	126
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1484	-	749	924
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	893	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1456	-	719	889
Mov Cap-2 Maneuver	-	-	-	-	719	-
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	876	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	786	-	-	1456	-
HCM Lane V/C Ratio	0.012	-	-	0.002	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	0	5	0	0	0	1	7	0	0	3	105
Future Vol, veh/h	80	0	5	0	0	0	1	7	0	0	3	105
Conflicting Peds, #/hr	20	0	20	0	0	0	20	0	0	0	0	20
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	0	5	0	0	0	1	8	0	0	3	114

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	21	0	0	-	-	0	218	218	-
Stage 1	-	-	-	-	-	-	197	197	-
Stage 2	-	-	-	-	-	-	21	21	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	-
Pot Cap-1 Maneuver	1595	-	-	0	-	0	770	680	0
Stage 1	-	-	-	0	-	0	836	738	0
Stage 2	-	-	-	0	-	0	1002	878	0
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1595	-	-	-	-	-	700	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	700	0	-
Stage 1	-	-	-	-	-	-	775	0	-
Stage 2	-	-	-	-	-	-	983	0	-

Approach	EB	WB	NB
HCM Control Delay, s	7	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT
Capacity (veh/h)	700	1595	-	-	-
HCM Lane V/C Ratio	0.012	0.055	-	-	-
HCM Control Delay (s)	10.2	7.4	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	5	5	110	5	5
Future Vol, veh/h	85	5	5	110	5	5
Conflicting Peds, #/hr	0	20	20	0	20	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	5	5	120	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	117	0	265	135
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	150	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1471	-	724	914
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1443	-	694	880
Mov Cap-2 Maneuver	-	-	-	-	694	-
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	776	-	-	1443	-
HCM Lane V/C Ratio	0.014	-	-	0.004	-
HCM Control Delay (s)	9.7	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	0	5	0	0	0	5	10	0	0	5	115
Future Vol, veh/h	90	0	5	0	0	0	5	10	0	0	5	115
Conflicting Peds, #/hr	20	0	20	0	0	0	20	0	0	0	0	20
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	0	5	0	0	0	5	11	0	0	5	125

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	21	0	0	-	-	0	240	240	-
Stage 1	-	-	-	-	-	-	219	219	-
Stage 2	-	-	-	-	-	-	21	21	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	-
Pot Cap-1 Maneuver	1595	-	-	0	-	0	748	661	0
Stage 1	-	-	-	0	-	0	817	722	0
Stage 2	-	-	-	0	-	0	1002	878	0
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1595	-	-	-	-	-	675	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	675	0	-
Stage 1	-	-	-	-	-	-	752	0	-
Stage 2	-	-	-	-	-	-	983	0	-

Approach	EB	WB	NB
HCM Control Delay, s	7	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT
Capacity (veh/h)	675	1595	-	-	-
HCM Lane V/C Ratio	0.024	0.061	-	-	-
HCM Control Delay (s)	10.5	7.4	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	86	13	5	111	9	7
Future Vol, veh/h	86	13	5	111	9	7
Conflicting Peds, #/hr	0	20	20	0	20	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	14	5	121	10	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	127	0	271	140
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1459	-	718	908
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	877	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1431	-	689	874
Mov Cap-2 Maneuver	-	-	-	-	689	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	759	-	-	1431	-
HCM Lane V/C Ratio	0.023	-	-	0.004	-
HCM Control Delay (s)	9.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	0	6	0	0	0	6	15	0	0	12	118
Future Vol, veh/h	92	0	6	0	0	0	6	15	0	0	12	118
Conflicting Peds, #/hr	20	0	20	0	0	0	20	0	0	0	0	20
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	0	7	0	0	0	7	16	0	0	13	128

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	21	0	0	-	-	0	245	245	-
Stage 1	-	-	-	-	-	-	224	224	-
Stage 2	-	-	-	-	-	-	21	21	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	-
Pot Cap-1 Maneuver	1595	-	-	0	-	0	743	657	0
Stage 1	-	-	-	0	-	0	813	718	0
Stage 2	-	-	-	0	-	0	1002	878	0
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1595	-	-	-	-	-	670	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	670	0	-
Stage 1	-	-	-	-	-	-	747	0	-
Stage 2	-	-	-	-	-	-	983	0	-

Approach	EB	WB	NB
HCM Control Delay, s	7	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT
Capacity (veh/h)	670	1595	-	-	-
HCM Lane V/C Ratio	0.034	0.063	-	-	-
HCM Control Delay (s)	10.6	7.4	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-

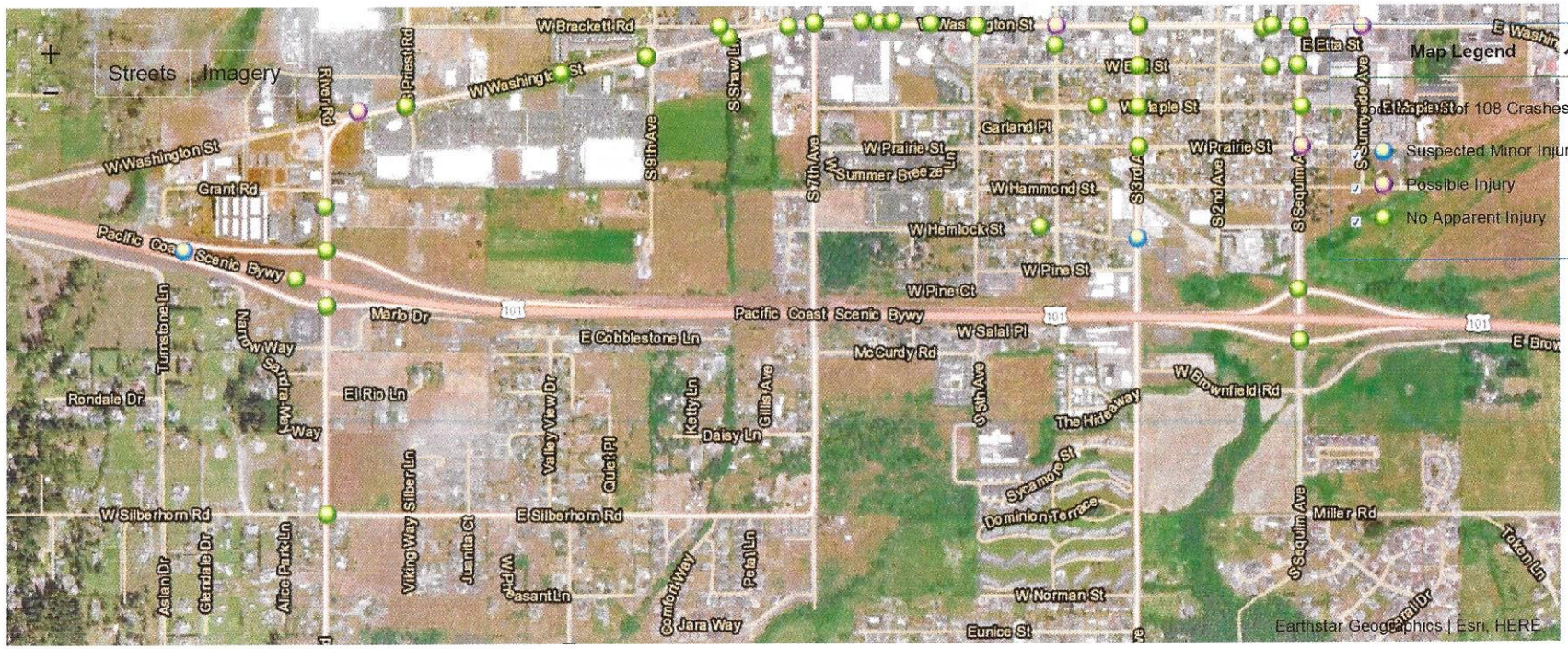
(http://www.wsdot.wa.gov)

Summary Reports - Total Crashes by Year

Report Year: 2015
Report Location: City of Sequim
Report Jurisdiction: All Roads

Under 23 U.S. Code 148 and 23 U.S. Code 409, safety data, reports, surveys, schedules, list complied or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such report, surveys, schedules, lists, or data.

Data Charts Notes Map Additional crash data available by clicking on map marker.



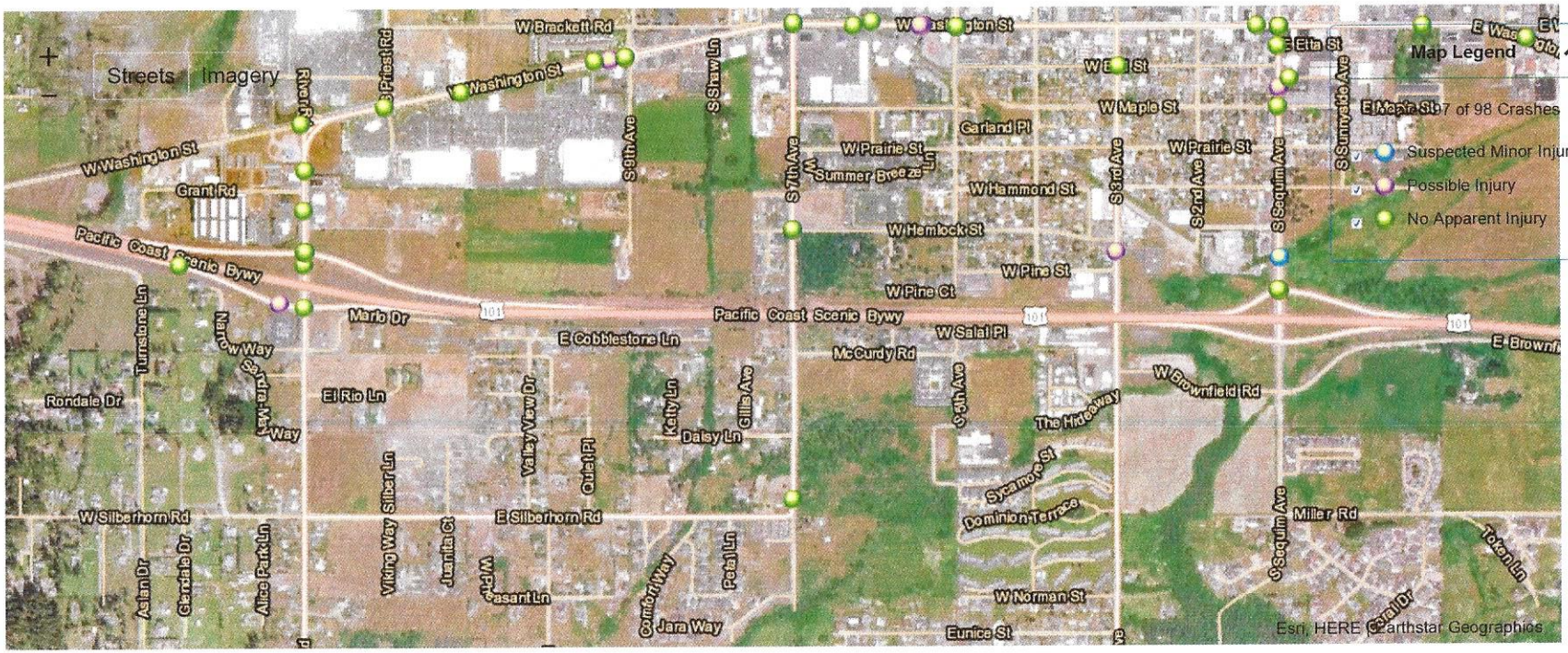
(http://www.wsdot.wa.gov)

Summary Reports - Total Crashes by Year

Report Year: 2016
Report Location: City of Sequim
Report Jurisdiction: All Roads

Under 23 U.S. Code 148 and 23 U.S. Code 409, safety data, reports, surveys, schedules, list complied or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such report, surveys, schedules, lists, or data.

Data Charts Notes Map Additional crash data available by clicking on map marker.



(http://www.wsdot.wa.gov)

Summary Reports - Total Crashes by Year

Report Year: 2017
Report Location: City of Sequim
Report Jurisdiction: All Roads

Under 23 U.S. Code 148 and 23 U.S. Code 409, safety data, reports, surveys, schedules, list complied or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such report, surveys, schedules, lists, or data.

Data Charts Notes Map Additional crash data available by clicking on map marker.

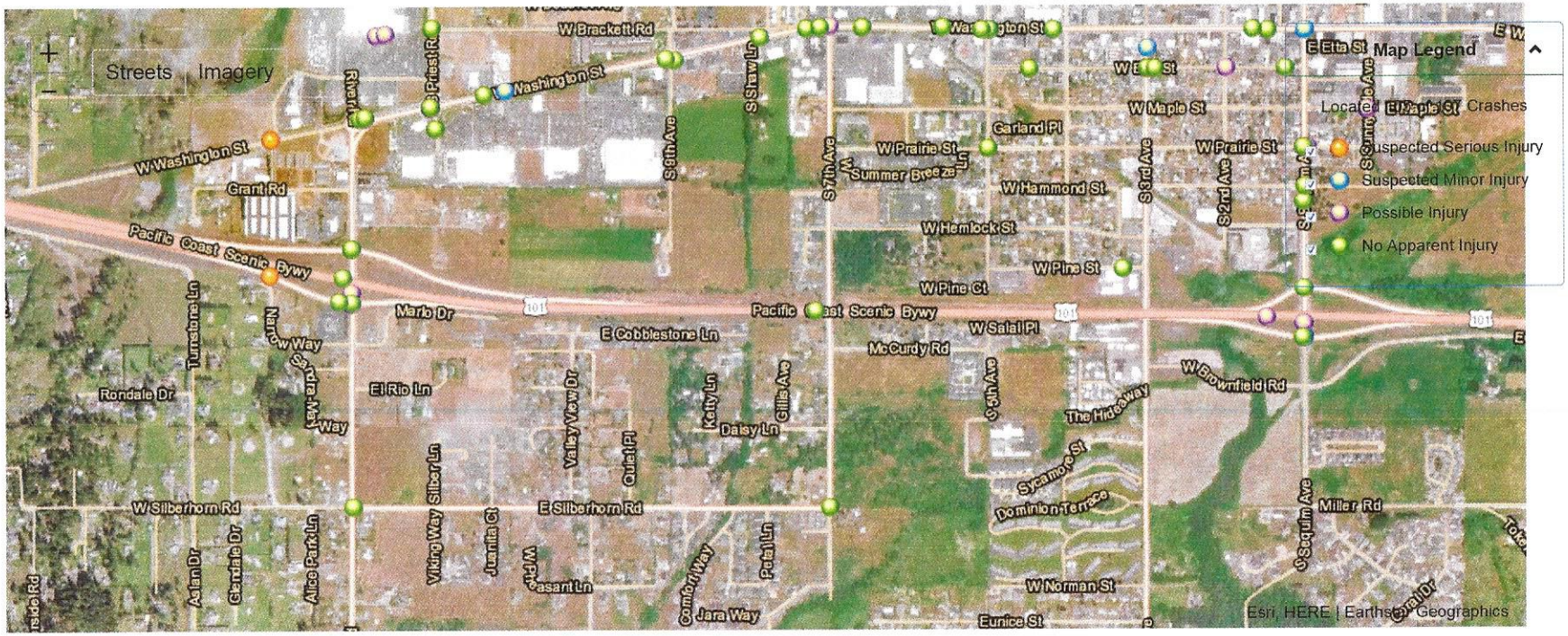


Exhibit A: 2018-2023 Transportation Improvement Program

#	Project Type	Location	Cost Estimate (thousands)	2018	2019	2020	2021	2022	2023
1	Pavement Rehab	City Wide pavement rehab	$2,411	$537	$281	$294	$307	$321	$671
2	Pavement Rehab	North Sequim Ave pavement rehab	$280					$280	
3	Pavement Rehab	Washington St pavement rehab	$3,045				$375	$1,305	$1,365
4	Improvement	Brown Rd widening & sidewalks (Fir to Hendrickson)	$571			$571			
5	Improvement	E Fir sidewalks and improvements (Sequim to Blake)	$1,696				$94	$783	$819
6	Improvement	N 9th Avenue widening & new construction (Brackett Road to Hendrickson)	$4,177	$157	$164	$1,885	$1,971		
7	Improvement	Kendall and Hendrickson intersection	$409			$409			
8	Improvement	S 7th sidewalks and improvements (Comfort to McCurdy)	$3,774					$250	$3,524
9	Improvement	Washington St signals timing & coordination	$150	$150					
10	Improvement	W Fir sidewalk and improvements (Sequim to 5th)	$3,860	$1,781	$2,079				
11	Improvement	West Prairie complete street (Sequim to 5th)	$1,649	$115	$440	$42	$481	$46	$525
12	Improvement	West Sequim Bay Rd shoreline repair	$68						$68
13	Improvement	West Washington eastbound aux lane at Priest Rd	$93			$16	$77		
14	Improvement	US 101/Whitefeather intersection improvements	$532					$298	$234
15	Planning	Transportation Master Plan update	$50		$50				
16	Pedestrian/Bike	Etta St active alleyway (Sequim to Sunnyside)	$644		$98	$546			
17	Pedestrian/Bike	Bell Cr trail	$1,674					$499	$1,175

#	Project Type	Location	Cost Estimate (thousands)	2018	2019	2020	2021	2022	2023	
18	Pedestrian/Bike	ODT E Hendrickson extension (UGA)	$335	$164	$171					
19	Pedestrian/Bike	Sunnyside sidewalk	$78						$78	
20	Pedestrian/Bike	Whitefeather trail	$532				$120	$412		
21	Connectivity	E Washington Pl new construction (Blake to Rhodefer)	$406				$85	$321		
22	Bicycle Facilities	E Washington Street bicycle facilities (Sequim Avenue to Simdars Road)	$170						$170	
23	Bicycle Facilities	N Sequim Avenue bicycle facilities (Washington Street to Fir Street)	$30						$30	
24	Bicycle Facilities	ODT Realignment in Carrie Blake Park	$80						$80	
25	Bicycle Facilities	W Washington Street bicycle facilities (Priest Road to 5th Avenue)	$70						$70	
26	Shared Use Path	W Sequim Bay Road shared use path (E Washington Street to Whitefeather Way)	$715						$715	
27	Pedestrian Improvement	S 3rd Ave Pedestrian Sidewalk/Pathways	$300						$300	
28	Pedestrian Improvement	Active Alleyway on Seal Street (Washington Street and Cedar)	$108						$108	
29	Pedestrian Improvement	Brackett Road sidewalk (N 9th Avenue to Priest Road)	$650						$650	
30	Pedestrian Improvement	Port Williams Road widening and pedestrian facilities	$650						$650	
31	New Signal	Prairie Street & S Sequim Avenue new signal	$375						$375	
32	New Signal Study	Washington Street Connections: Brown Road to Rhodefer Road study	$50						$50	
33	New Signal	US-101 Ramps & S Sequim Avenue new signals	$610						$610	
34	New Signal	Fir & N Sequim Avenue signal	$360						$360	
35	Intersection Improvement	W Washington Street & 2nd Avenue intersection improvement	$275						$275	
36	Intersection Improvement	Happy Valley Road & US 101 intersection improvement	$450						$450	
37	Intersection Improvement	Palo Alto Road & US 101 intersection improvement	$450						$450	
38	Facility Improvement	E Washington St Bus Turn-outs from Sequim to Rhodefer	$149						$149	
39	Facility Improvement	W Sequim Bay Road improvements (Whitefeather Way to City Limits)	$500						$500	
40	Road Connectivity	S 7th Avenue new construction (McCurdy Road to Reservoir Road)	$3,700						$3,700	
41	Road Connectivity	W Norman Street new construction (S 7th Avenue to S 3rd Avenue)	$1,000						$1,000	
42	Road Connectivity	W Brownfield Road Realignment from Sequim Ave to 3rd Ave	$1,469						$1,469	
43	Road Connectivity	W Maple Street Extension from S 5th Ave & S 4th Ave	$852						$852	
44	Road Connectivity	Simdars Road/US 101 Interchange	$3,400						$3,400	
45	City Wide Projects	City Wide Safety Projects	$401	$60	$62	$65	$68	$71	$75	
46	City Wide Projects	City Wide Minor Construction (small works)	$150	$25	$25	$25	$25	$25	$25	
48	City Wide Projects	City Wide Misc Right of Way	$30	$5	$5	$5	$5	$5	$5	
		denotes growth related projects		$2,994	$3,375	$3,858	$3,608	$4,616	$24,977	$43,428

Exhibit 4

CITY OF SEQUIM

152 West Cedar Street Sequim, WA 98382
City Hall (360) 683-4139 FAX (360) 681-3448
Public Works (360) 683-4908 FAX (360) 681-0552

November 14, 2019

Bruce Emery
Green Crow Investments Company, LLC
P.O. Box 2439
Port Angeles, WA 98362

Re: Home Subdivision Phase B – SUB 19-001

Dear Bruce,

As a follow up to our earlier conversation, the public meeting with the Planning Commission scheduled for November 19th and public hearing with the City Council scheduled for December 9th have been cancelled pending receipt of additional information from a third-party review of your submitted technical information as per your agreement with the Public Works Department.

As you are aware, the previously issued determination of completeness does not preclude the city from requiring additional information, that the applicant correct plans or perform studies at any time if new information is required for project review, or if there are substantial changes in the proposed action [SMC 20.01.130 G.1.]. Pursuant to RCW 36.70B.090(1)(a)(i), any period during which the city has requested the applicant to correct plans, perform required studies, provide additional information or any remand or appeal periods shall be excluded from the time period provided in this chapter.

The time period for requiring additional information shall be calculated from the date the city notifies you (Applicant) of the need for additional information (i.e., third party review) until the date the city determines whether the information satisfies the request for information. The date of this letter is your official notification which is 50 days into the official 120-day review process (September 25, 2019 to November 14, 2019). Once the requested information is received the process will resume with day 51.

If you have any questions or concerns regarding this matter, please contact the City of Sequim Department of Community Development at (360) 582-2476 or email me at twoolett@sequimwa.gov. Our office hours are 7:30 a.m. – 4:00 p.m., Monday through Friday.

Sincerely,

Tim Woolett
Senior Planner, DCD

Cc: Barry Berezowsky
David Garlington, Public Works Director
Matt Klontz, Assistant Public Works Director / City Engineer

Exhibit 15

DKS DKSASSOCIATES.COM

TIA REVIEW COMMENTS

DATE: December 3, 2019

TO: Dave Nakagawara | City of Sequim

FROM: Richard Hutchinson, PE, PTOE | DKS
Ilana Burstein | DKS
Christian Thompson | DKS

SUBJECT: HOME Subdivision Phase B TIA Review Project #19083-002

INTRODUCTION

DKS Associates has reviewed the traffic impact analysis (TIA) for the HOME Subdivision Phase B project.[1] The proposed development is located south of the current terminus of Rolling Hills Way and east of the current terminus of E Quail Lane in Sequim, WA. The project would construct 31 single family detached homes. The general comments and listing of recommendations are based on review of the TIA materials.

TIA COMMENTS

1. There seems to be some confusion with the numbering of both figures and tables. Several figures and tables are shown throughout the report but are not labelled or numbered. To easily refer to the figures and tables, they should be named and numbered in order of appearance.
2. On page 3, Rural Road is noted as a Collector. Where is Rural Road? Did the report mean to state River Road as a Collector?
3. Please state the existing analysis year in the body of the report, for example in the last paragraph of page 4.
4. Please state which analysis time periods (AM, PM, Midday, typical weekday, Saturday, Sunday) are being analyzed in this report.
5. The photographs on page 6 do not appear to be related to Incident/Safety History.
6. What are "good sight lines" in this context? What is the sight distance, as surveyed in the field?
7. Generally, at least 5 years of historical crash data is the minimum required to make a meaningful safety assessment. We recommend gathering crash data for the most recent 5 years.

[1] HOME Subdivision Phase B Traffic Impact Analysis, Jake Traffic Engineering Inc., October 4, 2018

8. Page 8 should note that rounding was applied to the volumes after the 2% growth.
9. What is a "Traffic Engineering inspection" in the context of page 9? How is one conducted on site access points that do not yet exist with live traffic?
10. Are there any additional background trips from Phase A that should be accounted for in this analysis? No projects were identified in the report that would generate trips in addition to the 2% growth.
11. On Figure 4, it is not clear how each approach is controlled. At Silberhorn and Rolling Hills, do all approaches have a stop sign? At Silberhorn and 7th, do both the northbound and eastbound approaches have stop signs?
12. On Figure 4 add the existing analysis year to the figure label.

January 11, 2022

Tim Woolett, Senior Planner
City of Sequim
152 W. Cedar St.
Sequim, WA 98362

RE: Public Works Department Conditions per Staff Report
Home Subdivision, Division B, Application SUB19-001

Dear Tim,

The following is a response to the Public Works Department Conditions stated on pages 16 through 19 of the Staff Report for Home Subdivision, Division B (application SUB19-001). Specifically, our intent here is to demonstrate that several of the stated conditions have already been addressed and/or provided to the City with respect to this project.

Condition #1. The site was inspected several times by the project engineer during late winter, early spring of 2020. No discernable channels or evidence of consolidated stormwater flow exist towards the base of the slope on the Legacy Ridge property, and no consolidated stormwater flow has ever been observed running from the Legacy Ridge property to the subject property. The only identified critical areas on or in proximity to the property is landslide hazard area and critical aquifer recharge area. The information contained in the Legacy Ridge Report only applies to the Legacy Ridge property and it is our contention that no verification was ever made concerning the extent of the identified stream channels down the face of the slope as it was not germane to that development. We invite City Staff to observe the slope from the subject property, but do not agree that we should be put in a position to prove the negative.

Condition #2. Again, we disagree with staff's assertion that there are two, Type 5 streams entering the property. Also, the June 1, 2021 Geotechnical Report clearly identifies that the Sequim-McKenna-Mukilteo complex soils exist only along the margins of the southern border of the site. The Report fully identifies the risks and makes reasonable recommendations for safe development on the site.

Condition #3. The question of whether Groundwater Mounding Analysis would be required was discussed at length during the January 28, 2020 meeting with City Staff and the project engineer. It was determined that the analysis would not be required if: "1) adequate separation be determined between the bottom of the proposed infiltration facilities and the seasonal high water table during additional test pit exploration, and 2) if the proposed infiltration facilities are dispersed throughout

the site rather than a single regional facility resulting in a concentrated stormwater water loading (S. Peters, 2/14/20)." A significant high precipitation/snow melt event in February 2020 allowed for high-value test pit results that the Public Works Department endorsed as adequate for determining high-water indications for the property. The June 1, 2021 Preliminary Stormwater Plan was developed according to this data and clearly satisfy the concerns of this section. Groundwater mounding analysis should not be required.

Condition #4. The June 1, 2021 Geotechnical Report satisfies the requirements of this condition.

Condition #5. A supplement to the original Traffic Impact Analysis was submitted on July 27, 2021 and accepted by Matt Klontz on August 5, 2021.

Condition #6. It appears from the language of this condition that the development engineer is requiring that all slopes 15% or greater be considered landslide hazard. However, Section 18.80.030, SMC, requires that the soils must also be determined impermeable, and springs or ground water seepage must also be present. Neither of the latter conditions exist on or near the base of the slope. For this reason, the 40% slope criteria should apply.

Condition #7. Also discussed during our January 28, 2020 meeting with staff, the City's water line easement does not preclude ownership or use, but merely establishes a protected use by the City to continue and maintain the water line therein. Blocking simple driveway access across the easement elevates the right of the City to exclusive, which is not granted in the underlying easement document. Per the January 28th discussion, the proponent is agreeable to including plat language alerting property owners to the presence of the easement and the City's right to conduct maintenance activities therein. But we do not agree that all driveway access should be restricted from the easement.

Condition #8. Assuming the irrigation ditch and easement are still active, we will show them on the face of the plat.

Condition #9. The application and June 1, 2021 engineered plans all show the proposed phasing of the development. As discussed during the January 4, Planning Commission meeting, some concern may exist with regard to the proposed temporary hammer-head turn-around proposed at the end of Phase 2. Specifically, there will be fourteen new lots at that point. While we are hopeful the City will accept the interim turn-around as satisfying their access requirements, we realize there may be need to complete the extension of Rolling Hills Way to create two points of access for the subdivision. All other infrastructure elements have been planned

according the each phase in order to stand-alone as required under Section 17.26.030, SMC.

Condition #10. The Preliminary Design Plans and Preliminary Stormwater Control Plan, dated June 1, 2021, address this condition.

Condition #11. The stormwater catchment system will be shown on the face of the plat along with a dedicated easement for installation and maintenance. O&M will be provided for all stormwater facilities.

Condition #12. The Preliminary Design Plans and Preliminary Stormwater Control Plan, dated June 1, 2021, address this condition.

Condition #13. The stormwater swale will be shown on the face of the plat along with a dedicated easement for installation and maintenance. There is no requirement that the dedicated area be a separate tract. O&M will be provided for all stormwater facilities.

Condition #14. It is unclear what the intent is regarding this condition. We are aware we will be responsible for extending a new water main from the 480 well on Reservoir Road. The 33 lots proposed within Division B would require an eight (8") inch water main; however, because of future capacity needs within the service area, a 10-inch water main is needed. Per our discussions with Matthew Klontz on this issue, we are agreeable to completing the water line installation with proportionate cost-share from the City to compensate for the increased labor and material costs in installing a ten-inch main verses an eight-inch main.

Thank you for your consideration on these issues. If you have any questions or would like to discuss this information further, please contact me at 360-477-8306 or at bruce@northpointeconstructionllc.com.

Sincerely,

Bruce W. Emery

Bruce Emery
North Pointe Construction LLC

Exhibit 17.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]

Total road and sidewalk area is estimated at 0.940± Ac. It is expected The project will include the import of 1,600 cubic Yards of road base material.

Concur with Checklist. - TW

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]

Yes, however, it is doubtful there will be any sediment transfer off-site due to pervious soils. Stormwater BMPs will also be implemented To Mitigate erosion risk.

Concur with Checklist. - TW

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]

Roads and sidewalks will cover about 17.4% of the site. Future Home construction and Drives will cover significantly more, but will be subject To City of Sequim development standards concerning lot coverag

Concur with Checklist. - TW

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]

A Stormwater Pollution Prevention Plan (SWPPP) will be required prior To land-disturbing activities. This will include the application of BMPs To govern all future construction activities on the site.

Compliance with the Western Washington Stormwater Management Manual, 2012 Edition as amended in 2014 will be sufficient to mitigate potential impacts. - TW

2. Air [help]

a. What types of emissions to the air would result from the proposal during construc operation, and maintenance when the project is completed? If any, generally des and give approximate quantities if known. [help]

Construction equipment and vehicles during construction proces. Normal residential vehicle use after Build out.

Concur with Checklist - TW

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]

No

Concur with Checklist - TW

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]

All machinery is required to meet State and Federal emissions standards. Dust may be Controlled through use of water applied To working areas as needed.

To mitigate the potential for adverse impacts to air quality due to dust emissions during construction, the proponent shall employ the use of watering all dust generating surfaces a minimum of three times daily or more as needed during construction phase of the project. Alternative non-chemical methods would be considered for approval by the City of Sequim. - TW

3. Water [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]

Yes. Although not shown on Clallam County Critical Area Maps, Two Type 9 Stream corridors are known to exist on portions of the slope To the South-east of the site. However, Field reconnaissance shows that no active channels exist on or within 50-feet of the subject property. Any Buffers required to protect against unstable slopes should be more than adequate to address any related concerns of this section.

Concur with Checklist - TW