# 4 UNIT TOWNHOUSE SITE DEVELOPMENT

# RECORD CIVIL CONSTRUCTION DRAWINGS 1980 SOMERSET STREET FERNDALE, WASHINGTON APRIL 2012

### PROJECT DATA

### OWNER APPLICANT

DJ & DJ CONTRACTING INC 7231 SECLUDED LANE FERNDALE, WA 98248 CONTACT: DJ VAN WEERDHUIZEN PH: (360) 380-6078

#### **ENGINEER**

WEB ENGINEERING LTD 149 WEST KELLOGG ROAD BELLINGHAM, WA 98226 CONTACT: NEIL LATTA, PE PH: (360) 671-7002 FAX: (360) 671-7081

#### SURVEYOR

CHRISTIE & CHRISTIE LAND SURVEYING, INC. 222 GRAND AVE. SUITE 'D' BELLINGHAM, WA 98225 CONTACT: BRIAN CHRISTIE, PLS PH: (360) 671-8855

#### BASIS OF BEARING

BASIS OF BEARING: CITY OF FERNDALE CONTROL POINTS 367 TO 368: N 11°04'24" E, 1170.95 FT

DATUM: CITY OF FERNDALE SURVEY MONUMENT NETWORK JUNE,

BENCHMARK: CITY OF FERNDALE CONTROL MONUMENT AT SOMERSET AVE AND PORTAL WAY ELEVATION: 40.73

# LEGAL DESCRIPTION

THE WEST HALF OF LOT 5, EXCEPT THE NORTH 2.3 FEET AND THE WEST HALF OF LOTS 6 THROUGH 10, INCLUSIVE, BLOCK 3. NEW FERNDALE ADDITION. ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 5 OF PLATS, PAGE(S) 4, RECORDS OF WHATCOM COUNTY, WASHINGTON.

#### PROPERTY DATA

SUBJECT PROPERTY (PER ROS): TAX PARCEL # 390220 174173 (8,492 SF)

### IMPERVIOUS AREA SUMMARY

SUBJECT PROPERTY: 8,492 SF (0.195 Ac)

ASPHALT: 3,610 SF CONCRETE: 1,040 SF

IMPERVIOUS AREA SITE COVERAGE:

## SOURCE OF WATER SUPPLY

CITY OF FERNDALE SANITARY SEWER MAIN

## SHEET INDEX

LANDSCAPE PLAN (DEFFERED SUBMITTAL BY OTHERS)

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN THE FOUR UNIT HOUSING

WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE

I CERTIFY THAT THE LOCATIONS, ELEVATIONS, DEPTHS AND A COURAGE REFLECTING MATERIALS ACTUALLY USED DURING CONSTRUCTION ACCURATE REFLECT EXISTING FIELD CONDITIONS AS DETERMINED TO THE PROPERTY OF THE PROPERTY

W. AXTON ROAD

C - 4 GRADING AND TESC PLAN

C-5 ROAD AND STORM PLAN

C - 6 WATER AND SEWER PLAN

STANDARD DETAILS

STANDARD DETAILS

ENGINEER CERTIFICATION

STANDARD ENGINEERING PRACTICE.

SUPERVISION ON THIS DATE.

BY: NEIL LATTA, PE DATE: 03/14/2013

BY: BRIAN CHRISTIE, PLS DATE: 03/14/2013

LABOUNTY RD

SURVEYOR'S CERTIFICATION

C - 1 COVER SHEET C-2 EXISTING CONDITIONS C - 3 HORIZONTAL CONTROL PLAN

IMPERVIOUS AREAS:

7,370 SF / 8,492 SF= 87%±

CITY OF FERNDALE PUBLIC DISTRIBUTION MAIN LOCATED ON SOMERSET STREET

# HORIZONTAL AND VERTICAL CONTROL METHOD OF SEWAGE DISPOSAL

**VINCINITY MAP** 

EATON ST.

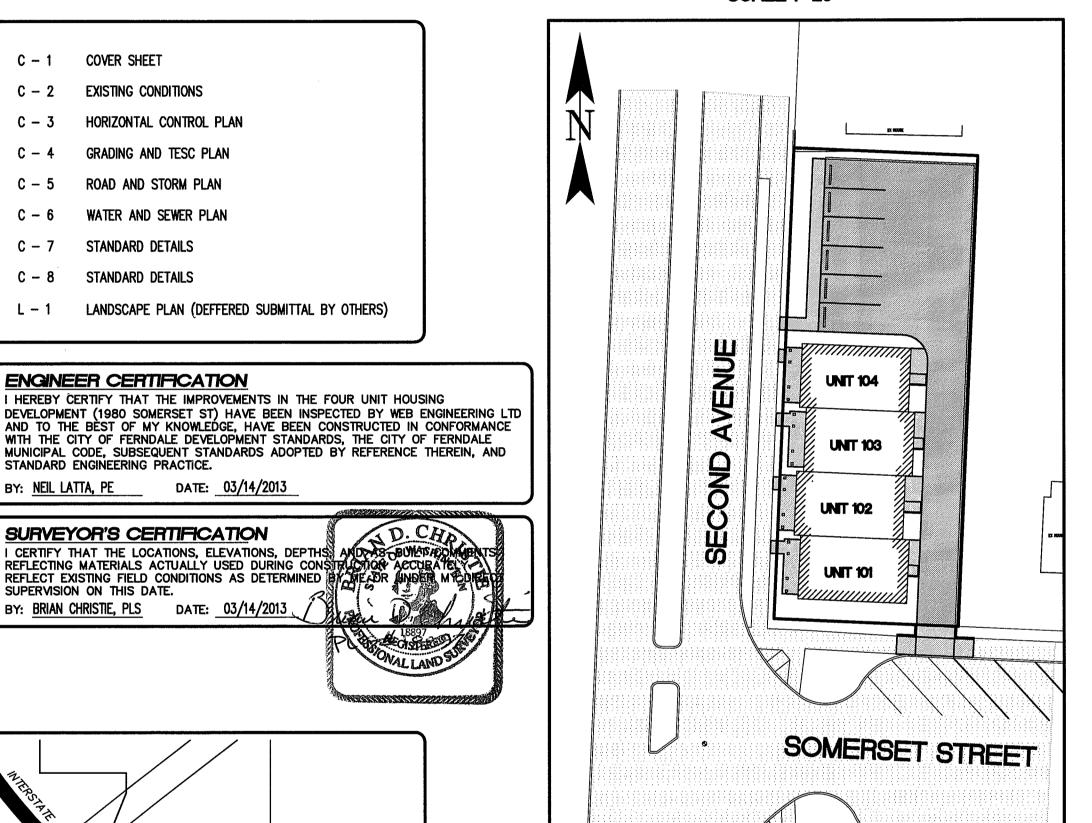
BECKI FI

MAIN STREET

LOCATED ON SECOND AVENUE

# OVERALL PLAN

SCALE 1'-20'



ESC

FEMA

L/LT

EROSION AND SEDIMENT CONTROL

END VERTICAL CURVE ELEVATION

END VERTICAL CURVE STATION

GENERAL BINDING SITE PLAN

LENGTH OF VERTICAL CURVE

PER PERCENT GRADE DIFFERENCE

FINISHED FLOOR

FLOWLINE

FOOT/FEET

**GROUND** 

LEFT

LOW POINT

HIGH POINT

FINISHED GROUND

INVERT ELEVATION

LINEAR FOOT/FEET

FEDERAL EMERGENCY MANAGEMENT AGENCY OC

# LEGEND

#### SYMBOLS 1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF WATER SYMBOLS: MISC SYMBOLS: TRANSPORTATION (STANDARD SPECIFICATIONS) AND AMENDMENTS TO THESE SPECIFICATIONS AS CONTAINED HEREIN, PARTICULARLY SECTIONS 5-0-EXISTING PROPOSED THROUGH 5-05. SECTIONS 7-08.3(3), 9-01 THROUGH 9-03 WILL GENERALLY APPLY UNLESS OTHERWISE STATED BELOW, OR BY THE CONTRACT DOCUMENTS. WORK AND MATERIALS SHALL ALSO CONFORM TO CITY OF FERNDALE (COF) DEVELOPMENT STANDARDS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL REDUCER 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23-TRAFFIC CONTROL SHALL APPLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY OWNERS FOR LOCATIONS AND TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION. VALVE PHONE: 1-800-454-5555. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT WITH EXISTING UTILITIES. MECHANICAL 4. THROUGHOUT THE WORK, THE CONTRACTOR SHALL COMPLY WITH ALL PERMITS.

	STORM DRAIN MA	INHOLE	•₩	WATER TIE-IN
LINE TYPE	<u>:8</u>	!	HATCHES	<u>3</u>
GAS		I.	* * * * * * * * * * * * * * * * * * *	WETLAND
22	Existing undergro Existing sewer lin Existing sewer lin	E	ψ ψ Ψ	WETLAND BUFFER
SD	PROPOSED SEWER L EXISTING STORM LIN EXISTING STORM LIN	E		
<u>sp</u>		INE		
W	EXISTING WATER LIN EXISTING WATER LIN PROPOSED WATER L	E TO BE REMOVED		
	PROPERTY BOUNDAF EASEMENT SUBJECT PROPERTY			
<del>* * * * * * * *</del>	*-*-*- FENCE			

SPECIFIC BINDING SITE PLAN

SEPTIC TANK EFFLUENT PUMP

UNLESS NOTED OTHERWISE

WHATCOM COUNTY CODE

WASHINGTON STATE

TEMPORARY EROSION AND SEDIMENT CONTROL

WASHINGTON DEPT OF FISH AND WILDLIFE

DATE:

**APRIL 2012** 

DEPARTMENT OF TRANSPORTATION

STORM DRAIN

SANITARY SEWER

TOP OF ASPHALT

TOP OF CONCRETE

VERTICAL CURVE

TEMPORARY

TYP

SOIL LOG

STATION

SERVICE

### 7. THE CONTRACTOR SHALL LAY OUT AND SET ANY CONSTRUCTION STAKES AND MARKS NEEDED TO ESTABLISH THE LINES, GRADES, SLOPES OR CROSS-SECTIONS AS SHOWN ON THE PLANS OR AS STAKED BY THE ENGINEER. 8. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN THE CONTRACTOR, OWNER,

-200-- — — EXISTING CONTOUR

MID/MP MIDPOINT

MINIMUM

MUTCD MANUAL ON UNIFORM

ON CENTER

OVERHEAD POWER

ON-SITE SEPTIC

POINT OF CURVE

PROPERTY LINE

POINT OF TANGENT

ROAD CENTER LINE

RIGHT OF WAY

RIGHT

ROW

R/RT

POINT OF INTERSECTION

POINT OF REVERSE CURVE

POINT OF VERTICAL CURVE ELEVATION

POINT OF VERTICAL CURVE STATION

POINT OF VERTICAL INTERSECTION

TRAFFIC CONTROL DEVICES

NATURAL RESOURCES CONSERVATION SERVICE STA

#### 1. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING. 2. FLAG OR FENCE CLEARING LIMITS.

3. POST SIGN WITH NAME AND PHONE NUMBER OF CERTIFIED TESC LEAD.

17. STREET LIGHTING DESIGN BY OTHERS (SEPARATE SUBMITTAL)

CONSTRUCTION SEQUENCE

4. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).

5. INSTALL PERIMETER PROTECTION, I.E., FILTER FABRIC FENCE

6. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR SWALES, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT. COMPLETE GRADING.

NOTES

5. A REVOCABLE ENCROACHMENT PERMIT SHALL BE OBTAINED PRIOR TO COMMENCING WORK IN THE RIGHT-OF-WAY

10. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK.

14. CONTRACTOR TO PROVIDE A 2 YEAR WARRANTY FOR MAINTAINING ALL GRADES ON DETENTION POND AND STRUCTURES.

15. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

standards, at a minimum permanent repairs must repair the hard surface in kind. See detail.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES (SILT FENCE, STRAW BALE DAMS, SILT PONDS, ETC.) THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING.

11. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.

12. ALL HARD SURFACED PAVEMENTS IN PUBLIC AREAS MUST BE REPAIRED AT THE CLOSE OF EACH WORK DAY. THE REPAIRS CAN BE temporary with asphalt cold mix or permanent with class B asphalt. All repairs shall be according to cof development

13. INSPECTIONS FOR ROAD, DRAINAGE, AND UTILITY CONSTRUCTION SHALL BE AS OUTLINED AND IN ACCORDANCE WITH THE CITY OF FERNDALE

16. GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE RETAINING WALL DESIGNS, ALL GRADING SLOPES, AND ALL GRADING EMBANKMENTS.

CITY ENGINEER AND PROJECT ENGINEER (MIN. 3 DAYS PRIOR TO STARTING).

7. INSTALL DRAINAGE CONTROL STRUCTURES.

GENERAL NOTES

8, MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF FERNDALE STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

9. RELOCATE SURFACE WATER CONTROLS AND EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO, THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY OF FERNDALE EROSION AND SEDIMENT CONTROL STANDARDS.

10, cover all areas that will be unworked for more than five days during the DRY season or one day during the wet season. USE STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING OR EQUIVALENT.

11. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.

12. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS

13. Install utilities.

14. COMPLETE FINISH GRADING OF SITE.

15. INSTALL PAVEMENT.

SCALE:

16. CLEAN AND FLUSH ENTIRE STORM SYSTEM. DO NOT DRAIN INTO ANY INFILTRATION FACILITY.

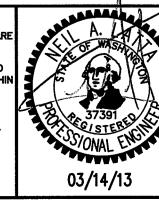
17. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BMPS REMOVED IF APPROPRIATE.

18. REMOVE TEMPORARY STANDPIPE AND SEDIMENTS FROM DETENTION POND

	SUBMITTAL FOR CITY REVIEW	NL	04/16/12
$\triangle$	REVISED PER CITY REVIEW COMMENTS	NL	05/09/12
2	RECORD DRAWING SUBMITTAL	NL	02/17/13

RECORD DRAWING NOTE: THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN HEREIN ARE BASED ON THE ORIGINAL DESIGN PLANS, AS-BUILT SURVEY BY OTHERS, AND SITE FIELD OBSERVATIONS. CONSTRUCTION RECORD AS-BUILT SURVEY DATA PROVIDED BY "CHRISTIE & CHRISTIE LAND SURVEYING" DATED JAN 23, 2013. THE NOTATION "AS-BUILT" WITHIN THIS RECORD DRAWING SET REPRESENTS THE ACTUAL MEASURED UTILITY LOCATIONS FROM THE REFERENCED AS-BUILT SURVEY BY OTHERS. ALL OTHER UTILITY INFORMATION SHOWN HEREIN NOT LABELED "AS-BUILT" REPRESENT THE APPROXIMATE LOCATION OF UTILITIES ONLY BASED ON THE ORIGINAL CIVIL DESIGN. THE EXACT LOCATION OF ALL UTILITIES MUST BE INDEPENDENTLY VERIFIED BEFORE COMMENCING ANY ADDITIONAL UNDERGROUND WORK. RECORD DRAWING SUBMITTAL 03/14/13 CALL 48 HOURS BEFORE YOU DIG REVISION

MAIN STREET



# WEB ENGINEERING LTD

STANDARD ABBREVIATIONS

AASHTO AMERICAN ASSOCIATION OF STATE

ALGEBRAIC GRADE DIFFERENCE

AMERICAN SOCIETY FOR TESTING

BEGIN VERTICAL CURVE ELEVATION

CORRUGATED POLYETHYLENE PIPE

CRUSHED SURFACING TOP COURSE

CORRUGATED METAL PIPE

BEGIN VERTICAL CURVE STATION

BEST MANAGEMENT PRACTICE

HIGHWAY AND TRANSPORTATION OFFICIALS EVCE

AC ASPHALTIC CONCRETE

AUDITOR'S FILE

CATCHBASIN

CUL-DE-SAC

CUBIC YARD(S)

DUCTILE IRON

CENTERLINE

consulting civil engineers

CB

CDS

CPEP

CY

125 WEST KELLOGG ROAD, BELLINGHAM, WA 98226 Ph: (360) 671-7002 Fax: (360) 671-7081

2012 (C) WEB ENGINEERING LTD (ALL RIGHTS RESERVED)

JUB NU.:		
	09169	
DWG. NAME:		
	COVER	
DESIGNED BY:		
	NL	
DRAWN BY:		
	BJS	
CHECKED BY:		

DJ + DJ CONTRACTING INC 7231 SECLUDED LANE FERNDALE, WA 98248

# **COVER SHEET**

4 UNIT TOWNHOUSE SITE DEVELOPMENT 1980 SOMERSET STREET, FERNDALE, WA

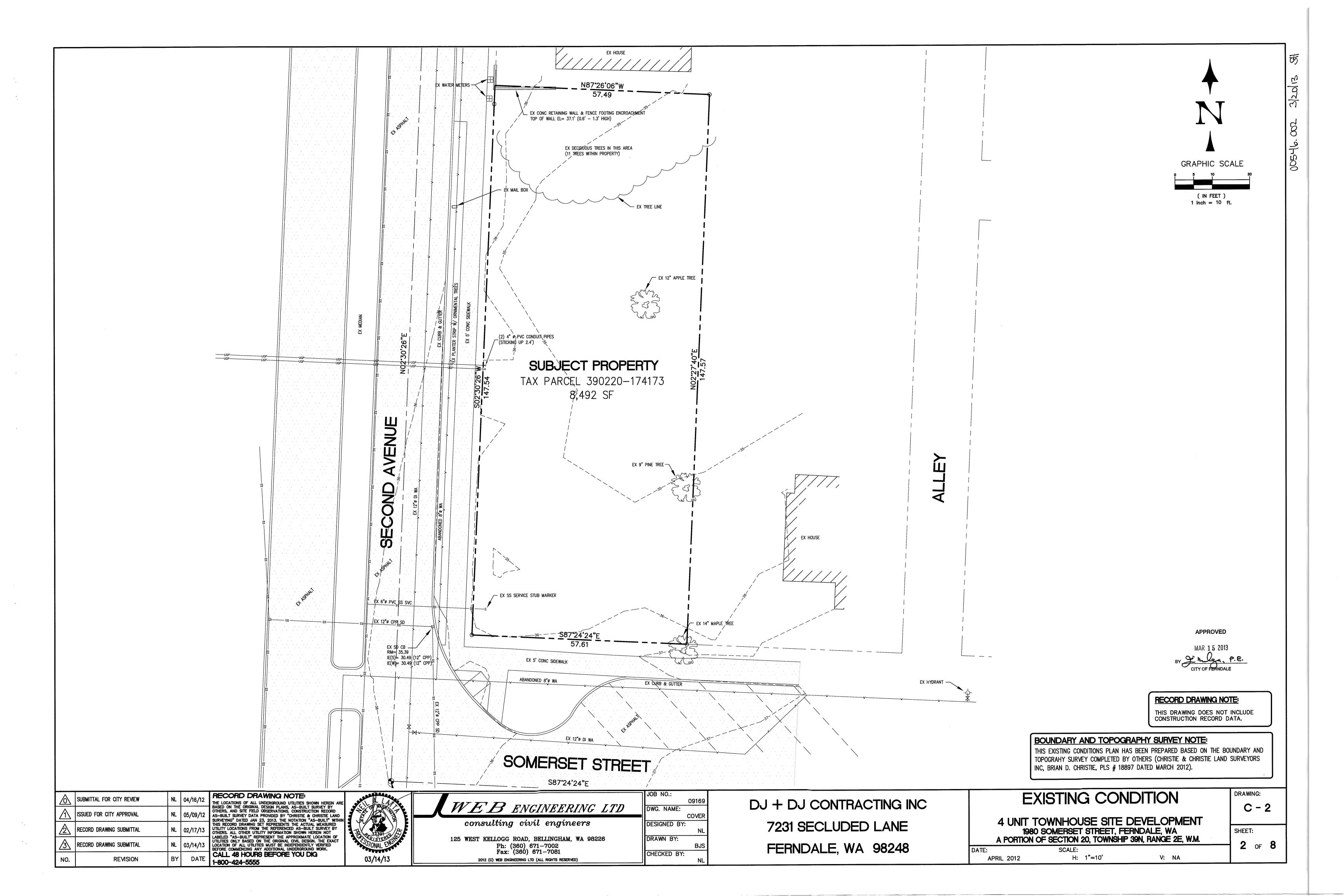
A PORTION OF SECTION 20, TOWNSHIP 39N, RANGE 2E, W.M.

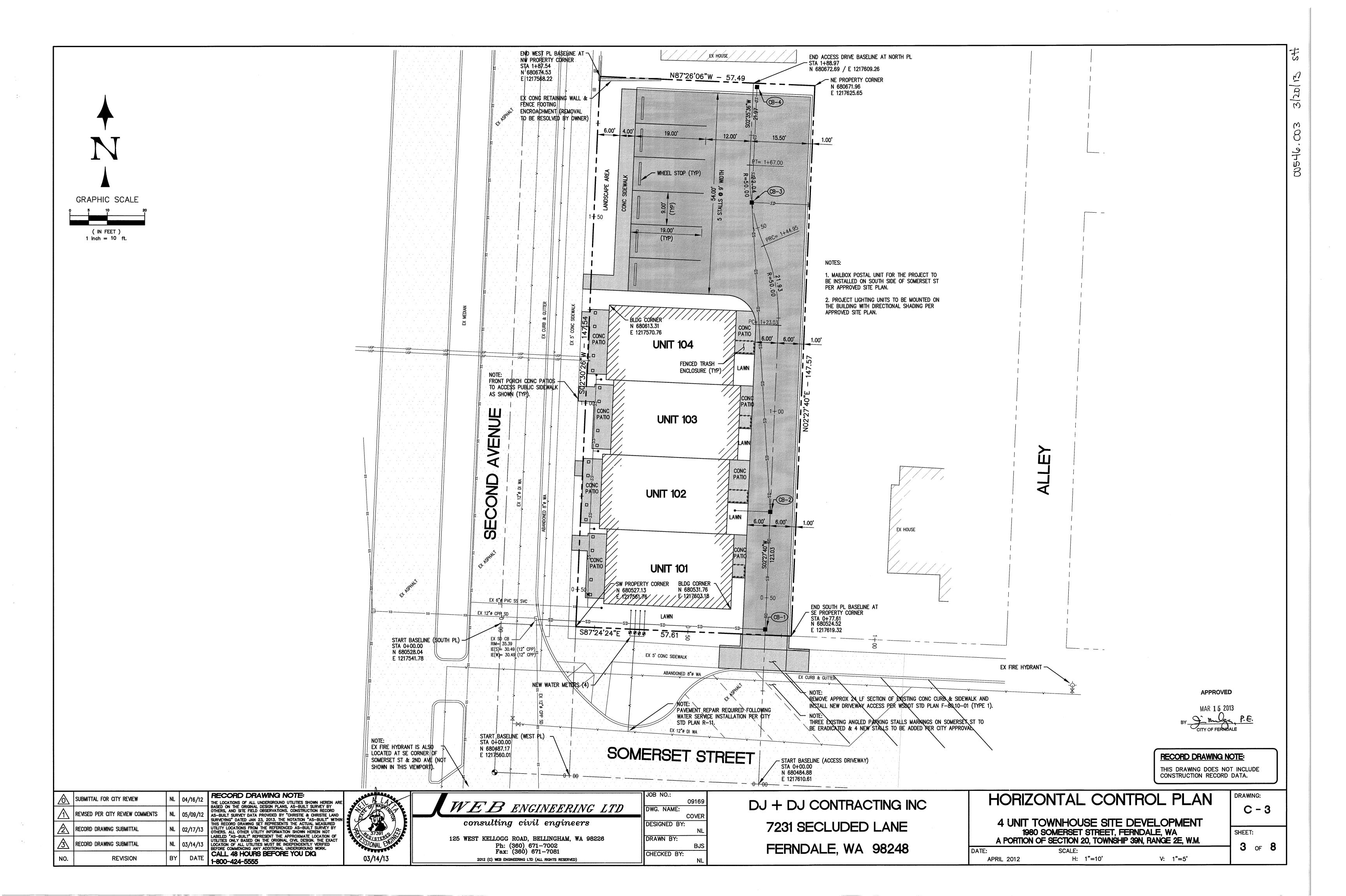
H: AS NOTED V: NA SHEET: of **8** 

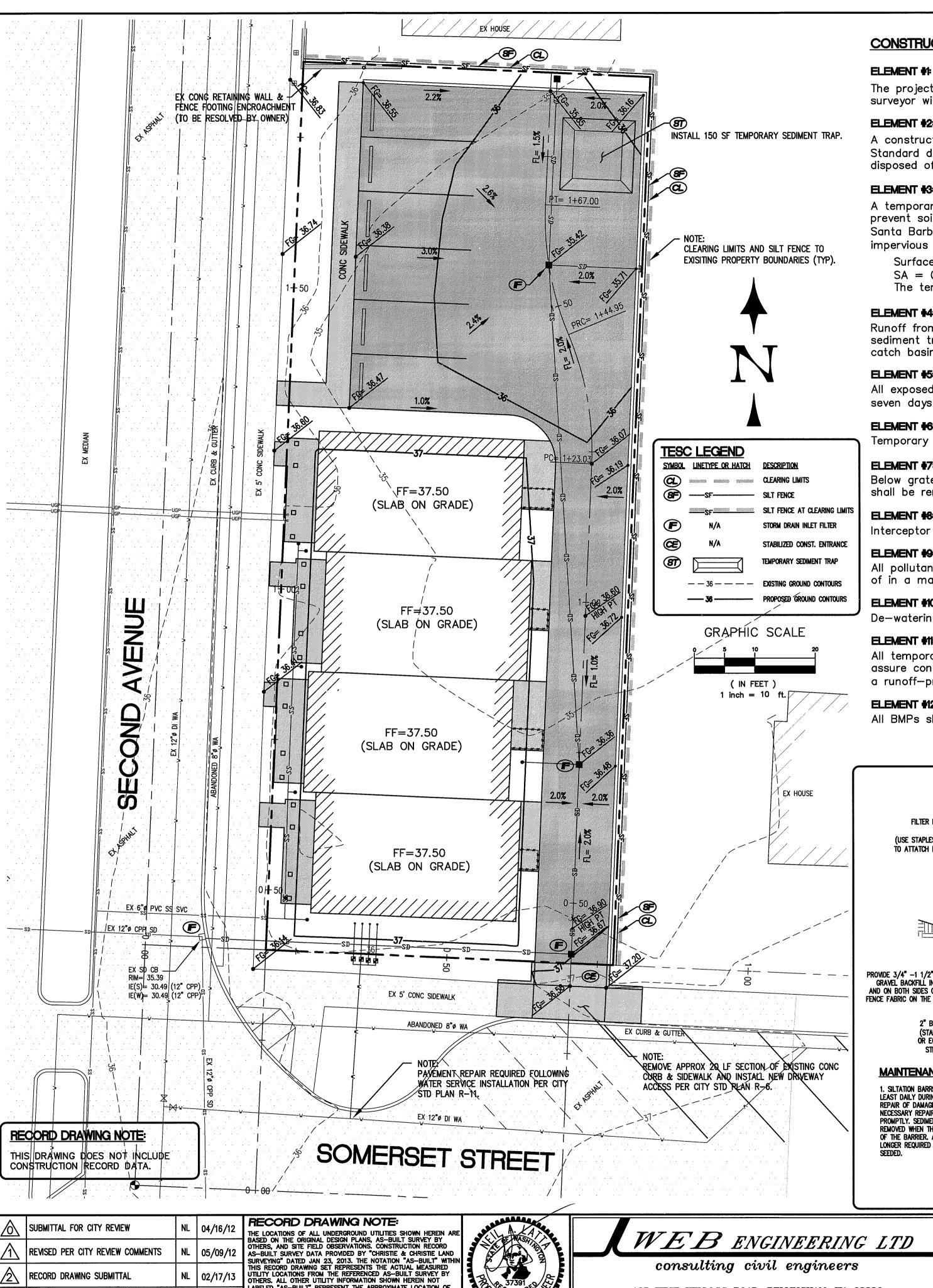
DRAWING:

APPROVED

CITY OF FERNDALE







LABELED "AS-BUILT" REPRESENT THE APPROXIMATE LOCATION OF UTILITIES ONLY BASED ON THE ORIGINAL CIVIL DESIGN. THE EXAC LOCATION OF ALL UTILITIES MUST BE INDEPENDENTLY VERIFIED BEFORE COMMENCING ANY ADDITIONAL UNDERGROUND WORK.

CALL 48 HOURS BEFORE YOU DIG

RECORD DRAWING SUBMITTAL

REVISION

#### CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

#### ELEMENT #1: MARK CLEARING LIMITS

The project will not require clearing beyond removal of isolated on site trees and vegetation. A qualified land surveyor will physically mark the property clearing limits on the site.

#### ELEMENT #2: ESTABLISH CONSTRUCTION ACCESS

A construction access (BMP C105) is proposed to be constructed to Somerset St in general accordance with the Standard detail (modified due to small property area). Any soil tracked onto paved areas shall be swept up and disposed of on a regular basis.

#### **ELEMENT #3: CONTROL FLOW RATES**

A temporary sediment trap (cleared area less than 3 acres) per BMP C240 in the SWMM has been sized to prevent soil laden waters from exiting the site. WWHM flow frequencies are typically less than those obtained by the Santa Barbara Urban Hydrology or Rational Method, therefore the 10 year flow frequency for the project (using all impervious areas) was utilized. The equations and design criterion for the sediment trap is as follows:

Surface Area  $(SA) = Q_2 \times 2080$ 

 $SA = 0.072 \times 2080 = 150 \text{ sf (Note: Q10 used for Q2)}$ 

The temporary trap will discharge to the storm drain pea gravel trench.

#### ELEMENT #4: INSTALL SEDIMENT CONTROLS

Runoff from disturbed areas will be collected by temporary interceptor swales and directed to the temporary sediment trap. Perimeter silt fencing will be installed. Catch basin inlet filters will be utilized to protect exiting catch basins adjacent to the project site.

#### ELEMENT #5: STABILIZE SOILS

All exposed and un-worked soils shall be stabilized and will not remain exposed and un-worked for more than seven days (two days if construction takes place between October 1 through April 30th).

#### ELEMENT #6: PROTECT SLOPES

Temporary cut slopes shall be protected with plastic covering per BMP C123.

#### **ELEMENT #7: PROTECT DRAIN INLETS**

Below grate basin filter inserts shall be installed in catch basins prior to completion of the project. The barriers shall be removed upon completion of construction.

#### ELEMENT #8: STABILIZE CHANNELS AND OUTLETS

Interceptor swales (if required) will be positively graded and seeded (BMP C120) or lined (BMP C202).

#### **ELEMENT #9: CONTROL POLLUTANTS**

All pollutants including waste materials and construction debris, that occur on—site shall be handled and disposed of in a manner that does not cause contamination of stormwater.

#### **ELEMENT #10: CONTROL DEWATERING**

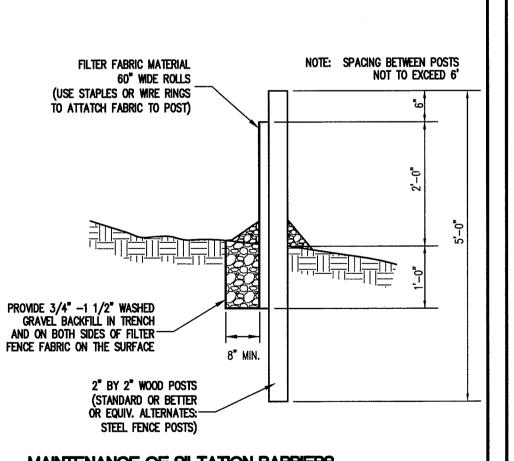
De-watering shall be routed to the on-site temporary sediment trap.

#### ELEMENT #11: MAINTAIN BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained by and repaired as needed to assure continued performance of their intended function. Sediment control BMPs shall be inspected weekly or after a runoff-producing storm event during the dry season (daily if construction takes place during the wet season).

### ELEMENT #12: MANAGE THE PROJECT

All BMPs shall be inspected and maintained by the Contractor's Certified Erosion and Sediment Control Lead.



#### MAINTENANCE OF SILTATION BARRIERS

1. SILTATION BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLOSE ATTENTION SHALL BE PAID TO THE repair of Damaged Barriers, end runs and undercutting beneath barriers. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED promptly. Sediment deposits should be removed after each rainfall. They must be REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND

09169

COVER

#### SILT FENCE

JOB NO.:

125 WEST KELLOGG ROAD, BELLINGHAM, WA 98226

Ph: (360) 671-7002

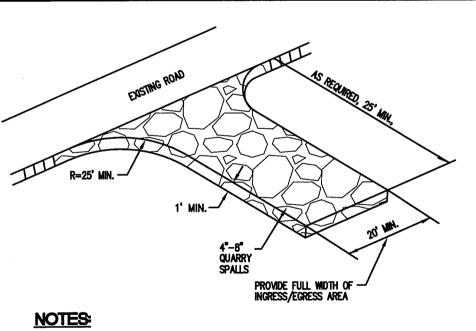
Fax: (360) 671-7081

DWG. NAME:

DRAWN BY

DESIGNED BY:

CHECKED BY:



1. INSTALLATION: THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS IN THE PLAN. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

2. AGGREGATE: 4" TO 6" CRUSHED BALLAST ROCK

MUST BE REMOVED IMMEDIATELY.

DJ + DJ CONTRACTING INC

7231 SECLUDED LANE

FERNDALE, WA 98248

3. ENTRANCE DIMENSIONS: THE AGGREGATE LAYER MUST BE AT LEAST 6 INCHES THICK. IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA. THE LENGTH 4. Washing: If conditions on the site are such that most of the mud is not

REMOVED FROM VEHICLE TIRES BY CONTACT WITH THE GRAVEL, THEN THE TIRES MUST BE

WASHED BEFORE VEHICLES ENTER A PUBLIC ROAD. WASH WATER MUST BE CARRIED AWAY

FROM THE ENTRANCE TO A SETTLING AREA TO REMOVE SEDIMENT. A WASH RACK MAY ALSO BE USED TO MAKE WASHING MORE CONVENIENT AND EFFECTIVE. . MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR

CLEAN OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAY OR INTO STORM DRAINS

CONSTRUCTION ENTRANCE

#### GRADING SPECIFICATIONS

1. SITE SOILS ARE CONSIDERED MOISTURE SENSITIVE AND ARE SUSCEPTIBLE TO DISTURBANCE BY CONSTRUCTION EQUIPMENT. PARTICULARLY DURING WET WEATHER. THE GRADING CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND TO PROTECT THE SITE GRADING AREA FROM EXCESSIVE EROSION.

2. AREAS TO RECEIVE FILL SHALL BE CLEARED OF ALL VEGETATION AND DELETERIOUS MATERIAL.

3. AREAS TO RECEIVE FILL SHALL BE PROOF ROLLED. ALL LOOSE OR SOFT AREAS SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL. 4. ALL FILL MATERIALS SHALL BE FREE OF VEGETATION AND DELETERIOUS MATERIAL AND SHALL NOT CONTAIN ROCKS GREATER THAN SIX INCHES

5. Structural fills shall be placed in 6"—8" thick loose horizontal lifts and spread uniformly. After each lift has been PLACED AND SPREAD EVENLY, STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY BY MODIFIED PROCTOR TEST (ASTM D-1557-70).

6. NON-STRUCTURAL FILL MAY BE COMPACTED TO 85-90% PROCTOR.

7. THE SURFACE OF ALL SLOPES SHALL BE COMPACTED. THIS MAY BE ACCOMPLISHED BY OVER-BUILDING THE SLOPES, THEN CUTTING BACK TO FINAL GRADES, OR BY RUNNING THE COMPACTOR OVER THE SLOPE AS EACH FILL LIFT IS BEING PLACED. ALL SLOPES SHALL BE COMPACTED BY

8, FIELD DENSITY TESTS SHALL BE MADE BY A QUALIFIED SOILS ENGINEER. DENSITY TESTS SHALL BE TAKEN AT OR JUST BELOW THE SURFACE OF THE FILL AT A LOCATION AND FREQUENCY DETERMINED BY THE SOILS ENGINEER. WHEN THE SOIL TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR ANY PORTION THEREOF IS BELOW THE SPECIFIED DENSITY, THE PARTICULAR SECTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY HAS BEEN OBTAINED, COPIES OF TESTING REPORTS SHALL BE PROVIDED TO CITY ENGINEER.

9. PUBLIC STREETS SHALL BE KEPT CLEAR OF DIRT AND DEBRIS DURING GRADING OPERATIONS.

10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EARTHWORK QUANTITIES PRIOR TO BID SUBMITTAL. NO REPRESENTATION IS MADE IN THESE PLANS REGARDING THE CONSTRUCTION SUITABILITY OF ON-SITE SOILS OR THE FINAL CUT/FILL BALANCE.

#### **EROSION CONTROL NOTES**

1. APPROVAL OF THE EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

2. THE IMPLEMENTATION OF THE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES

IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED. 3. The Boundaries of the Clearing Limits Shown on this plan shall be Clearly Flagged in the Field Prior to Construction.

DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

4. THE ESC FACILITIES SHOWN ON THE PLANS MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER

5. THE ESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED

6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED

7. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 7

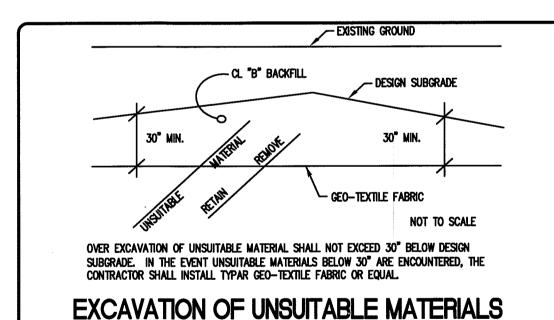
DAYS, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.). 8. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.

9. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS

10. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE 11. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE

12. DURING THE TIME PERIOD OF NOVEMBER 1 THROUGH MARCH 31, ALL PROJECT DISTURBED AREAS GREATER THAN 5,000 SQUARE FEET THAT ARE TO BE LEFT UNWORKED FOR MORE THAN 12 HOURS, SHALL BE COVERED BY ONE OF THE FOLLOWING COVER MEASURES: MULCH, SODDING

13. PUBLIC RIGHTS OF WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE MANNER AT ALL TIMES. IN THE EVENT MATERIAL ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEPT AND REMOVED PRIOR



APPROVED CITY OF FERNDALE

LANDSCAPE ROAD & ALL TABULATED VOLUMES ARE TO SUBGRADE COMPACT TO 95% OPTIMUM DENSITY MAXIMUM LIFT DEPTH = 6" METHOD B OPTIMUM DENSITY MAXIMUM LIFT DEPTH = 1'UNCLASSIFIED FILL OPTIMUM DENSITY MAXIMUM LIFT - Existing Ground

WHEN PLANS CALL FOR STRUCTURAL FILL, THE TOP FOUR (4') FEET OF FILLS BENEATH ALL LANDSCAPE AREAS AND BELOW THE TOP FOUR (4') FEET (AS STRUCTURAL FILLS SHALL BE CONSTRUCTED OF CLASS "B" OR EQUAL MEASURED FROM SUBGRADE) OF OTHER AREAS SHALL BE CONSTRUCTED WITH PIT-RUN GRAVEL OR OTHER MATERIAL AS APPROVED BY THE ENGINEER. CLEAN, ORGANICS FREE SOIL, INCLUDING ROCK DEBRIS. (NOT EXCEEDING 8" DIA.)

COMPACTION SPECIFICATIONS - APWA

4 UNIT TOWNHOUSE SITE DEVELOPMENT
1980 SOMERSET STREET, FERNDALE, WA

C-4

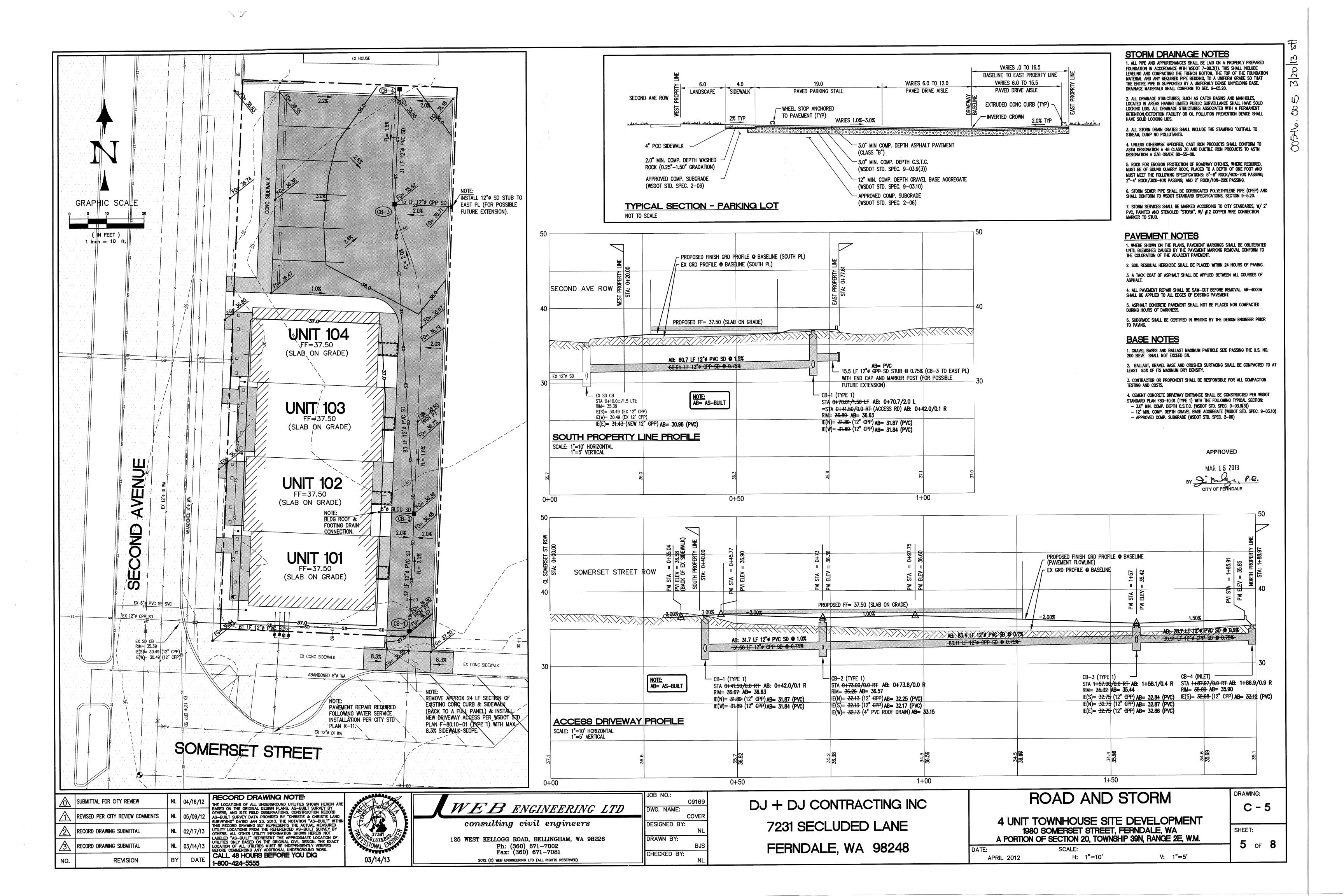
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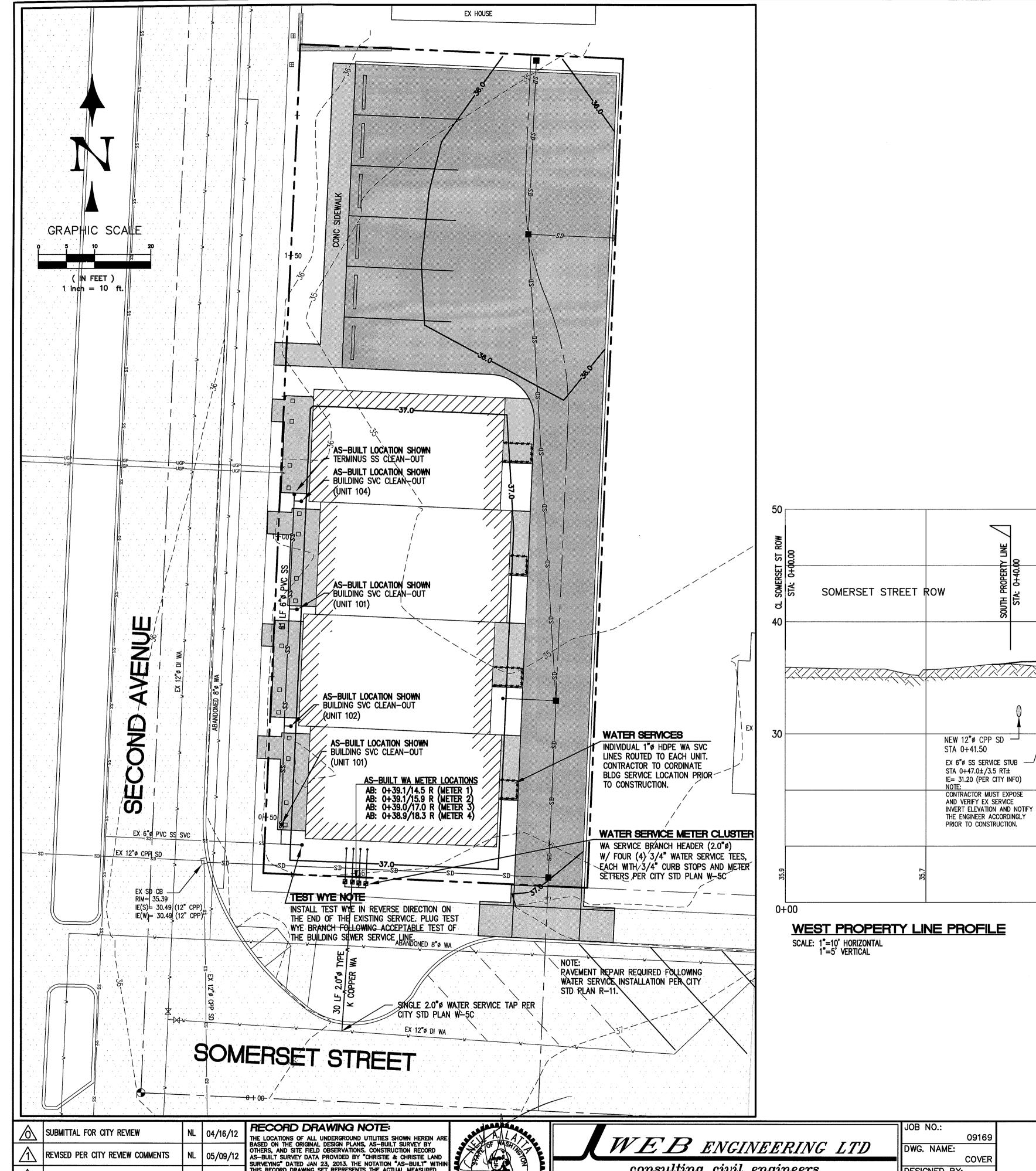
A PORTION OF SECTION 20, TOWNSHIP 39N, HANGE 2E, W.M.

GRADING AND TESC PLAN

SHEET: 4 of 8

H: 1"=10' V: 1"=5' **APRIL 2012** 





#### **WATER NOTES**

OR M.J. JOINTS.

FERNDALE STANDARD PLAN W-5C.

ALL PIPE SHALL BE OF A.W.W.A. STANDARDS H3-71, C151-71 AND CEMENT LINING C104-71, AND SHALL BE DUCTILE CAST-IRON, STANDARD THICKNESS CLASS 50 PUSH-ON JOINTS OR M.J. JOINTS. THE PIPE SHALL BE OF 150 PSI WORKING PRESSURE, PLUS 100 PSI SURGE PRESSURE. NO PVC OR AC PIPE WILL BE ALLOWED. PIPE LAYING SHALL MEET THE REQUIREMENTS OF SECTION 7-08 OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. ALL PIPE SHALL HAVE A MINIMUM COVERING OF 42 INCHES.

MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO A.W.W.A. SPECIFICATIONS C-110-71 AND C-104-71.

3. CONCRETE THRUST BLOCKING -CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY STANDARD DETAILS, OR AS DIRECTED BY PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(21) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE CAST BLOCKS ARE ALLOWED.

4. CONNECTION TO EXISTING WATER MAINS —
THE CONTRACTOR MUST NOTIFY THE CITY PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.

5. TESTING AND DISINFECTION -ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTIONS 7-09.3(23) AND 7-09.3(24) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL

CONSTRUCTION - CURRENT EDITION. HYDROSTATIC TESTING INSPECTED BY CITY.

6. WATER SERVICE TRANSFERS -TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE CITY DEVELOPMENT STANDARDS.

GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 8 INCHES, AND SHALL BE INSTALLED IN CAST-IRON VALVE BOXES. SHORT-BODY VALVES SUITABLE FOR A NONSHOCK SHUT-OFF PRESSURE OF 130 PSI RESILIENT SEAT VALVES AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO A.W.W.A. C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS ALL VALVES SHALL HAVE NONRISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE

VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS. MARK ALL SERVICE LOCATIONS WITH METER BOX PER CITY OF FERNDALE STANDARD PLAN W-5C. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF CITY OF

### **SANITARY SEWER NOTES**

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF FERNDALE STANDARD SPECIFICATIONS AND DETAILS. A.P.W.A. STANDARD SPECIFICATIONS. AND WSDOT STANDARD SPECIFICATION, LATEST EDITION, AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE.

2. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK.

3. SEWER MAIN AND SERVICES SHALL BE A MINIMUM 8 INCHES DIAMETER PVC CONFORMING TO WSDOT SPECIFICATION 9-05.12(1) AND INSTALLED TO CITY

4. TESTING OF THE SEWER SYSTEM SHALL BE DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE. TESTING SHALL COMPLY WITH WSDOT 7-17.3(2)F. SANITARY SEWERS SHALL BE TESTED AT 5 PSI FOR 15 MINUTES.

ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL OR SUITABLE NATURAL MATERIAL AS DIRECTED BY THE ENGINEER, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY, IN ACCORDANCE WITH CITY OF FERNDALE DETAIL SS-15 AND WSDOT

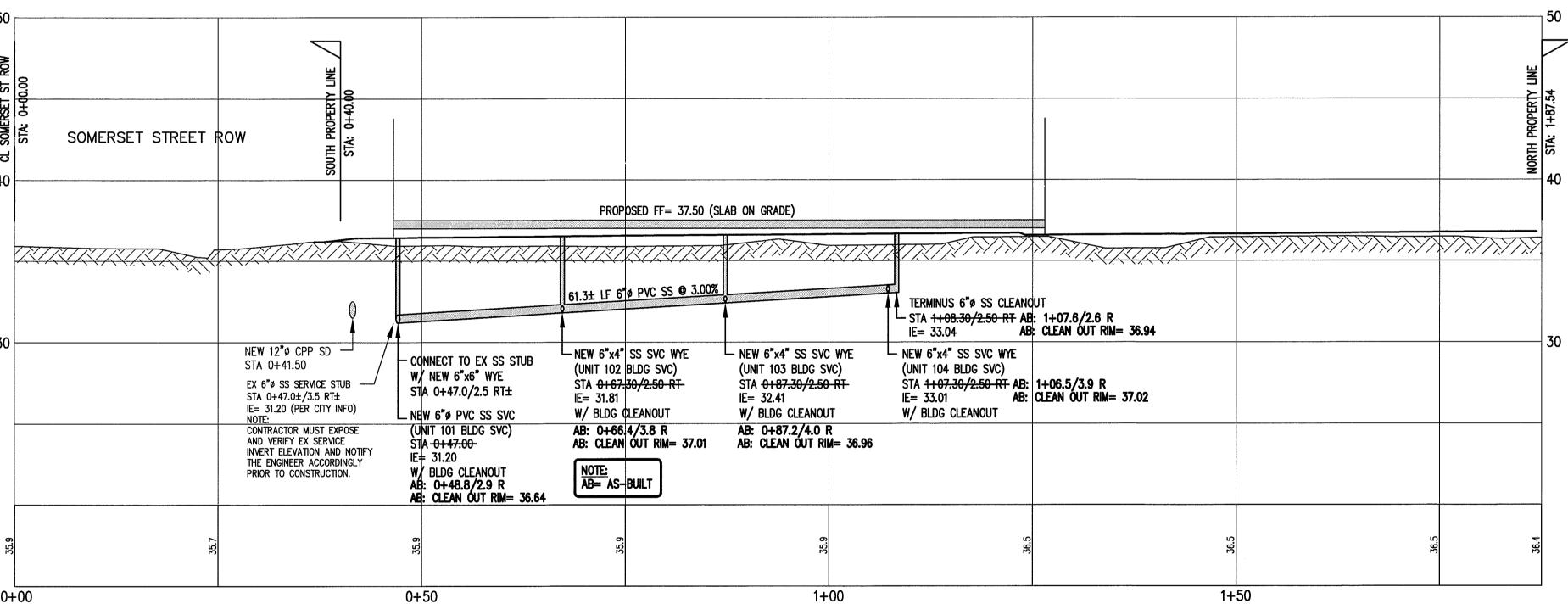
6. ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE SS-2, SS-3, SS-4, AND SHALL BE PRE-CHANNELED.

7. SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARDS SS-6, SS-8 AND SS-13. SEWER STUBS SHALL BE CAPPED AND MARKED W/ 2" PVC. PAINTED AND STENCILED "SEWER." CONNECT PVC MARKER TO STUB W/ #12 COPPER WIRE.

8. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO

9. BEDDING SHALL BE PEA GRAVEL PER SS-1.

10. ALL CLEANOUTS SHALL BE INSTALLED PER CITY OF FERNDALE SS-5.



**APPROVED** 

V: 1"=5'

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OTHERS, AND SITE FIELD OBSERVATIONS. CONSTRUCTION RECORD AS—BUILT SURVEY DATA PROVIDED BY "CHRISTIE & CHRISTIE LAND SURVEYING" DATED JAN 23, 2013. THE NOTATION "AS—BUILT" WITHIN THIS RECORD DRAWING SET REPRESENTS THE ACTUAL MEASURED UTILITY LOCATIONS FROM THE REFERENCED AS—BUILT SURVEY BY OTHERS. ALL OTHER UTILITY INFORMATION SHOWN HEREIN NOT LABELED "AS—BUILT" REPRESENT THE APPROXIMATE LOCATION OF UTILITIES ONLY BASED ON THE ORIGINAL CIVIL DESIGN. THE EXACT LOCATION OF ALL UTILITIES MUST BE INDEPENDENTLY VERIFIED BEFORE COMMENCING ANY ADDITIONAL UNDERGROUND WORK. SEFORE COMMENCING ANY ADDITIONAL UNDERGROUND WO 1-800-424-5555

03/14/13

consulting civil engineers

125 WEST KELLOGG ROAD, BELLINGHAM, WA 98226 Ph: (360) 671-7002 Fax: \( (360) \) 671-7081 2012 (C) WEB ENGINEERING LTD (ALL RIGHTS RESERVED)

DESIGNED BY: DRAWN BY: CHECKED BY:

DJ + DJ CONTRACTING INC 7231 SECLUDED LANE FERNDALE, WA 98248

WATER AND SEWER

4 UNIT TOWNHOUSE SITE DEVELOPMENT 1980 SOMERSET STREET, FERNDALE, WA

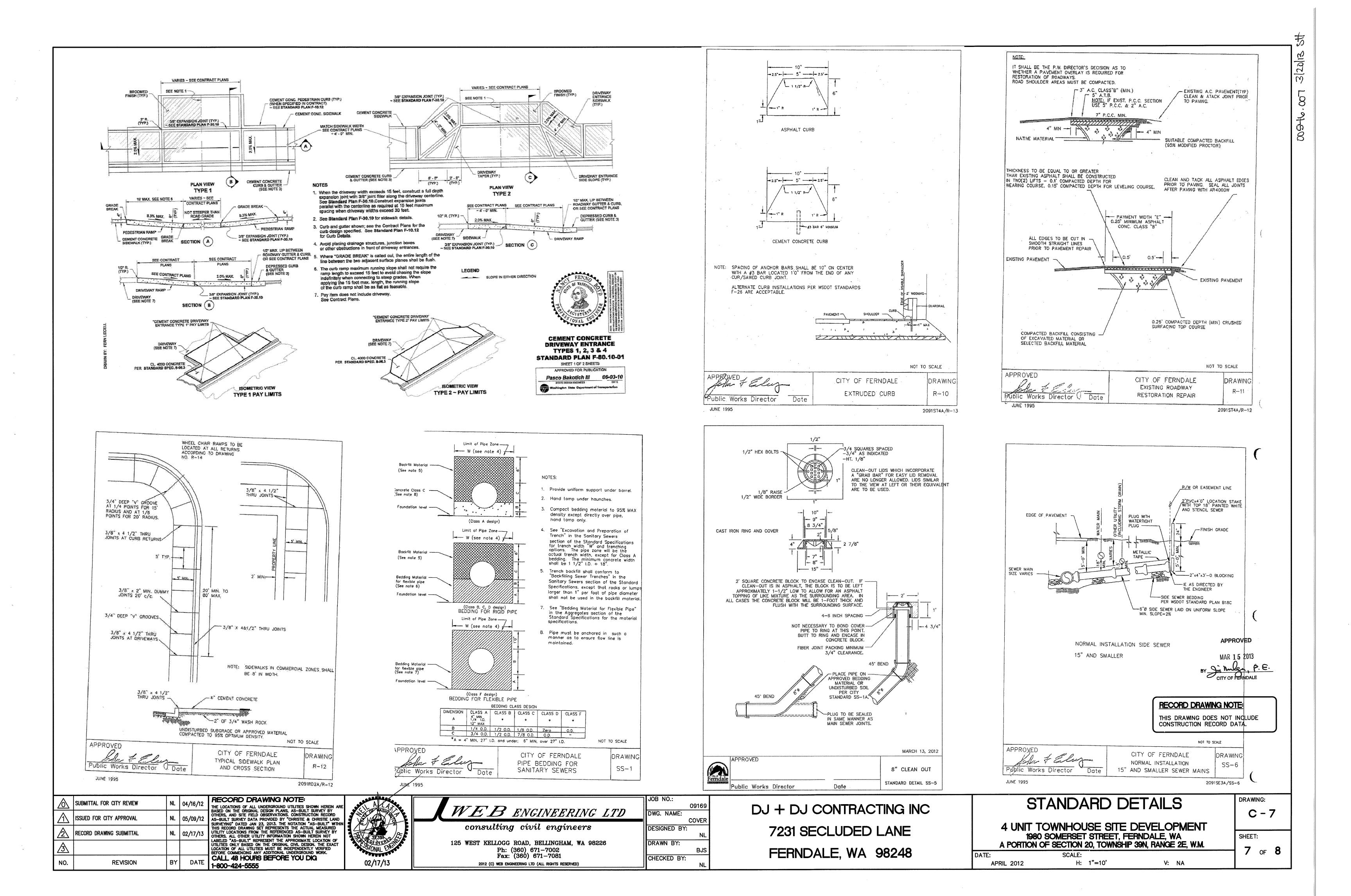
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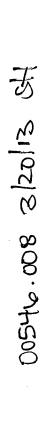
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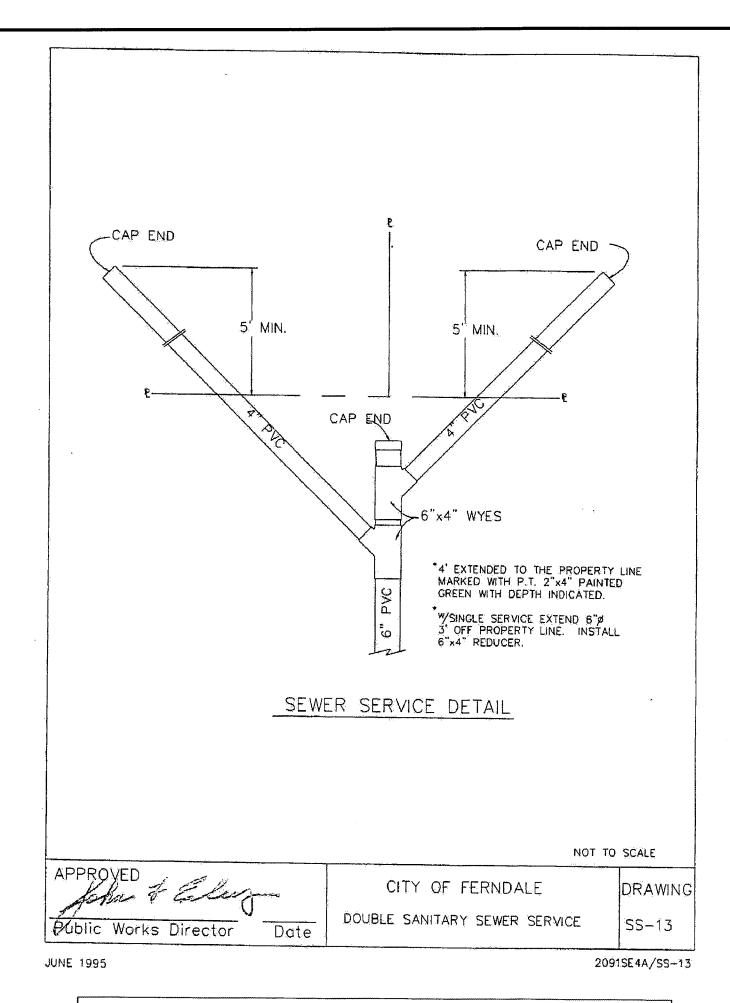
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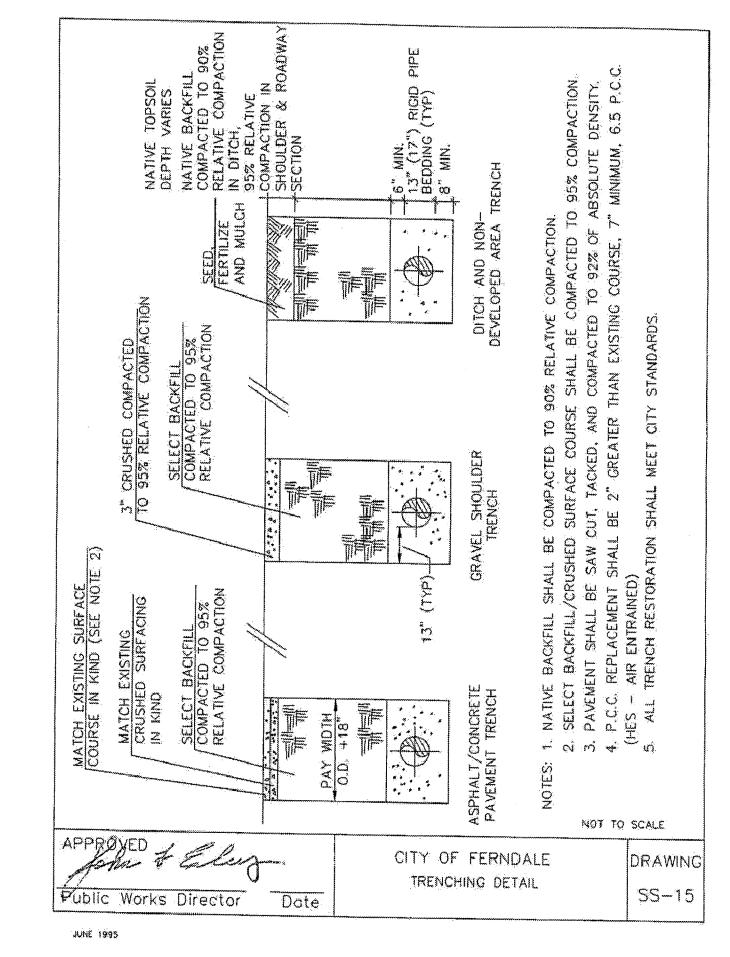
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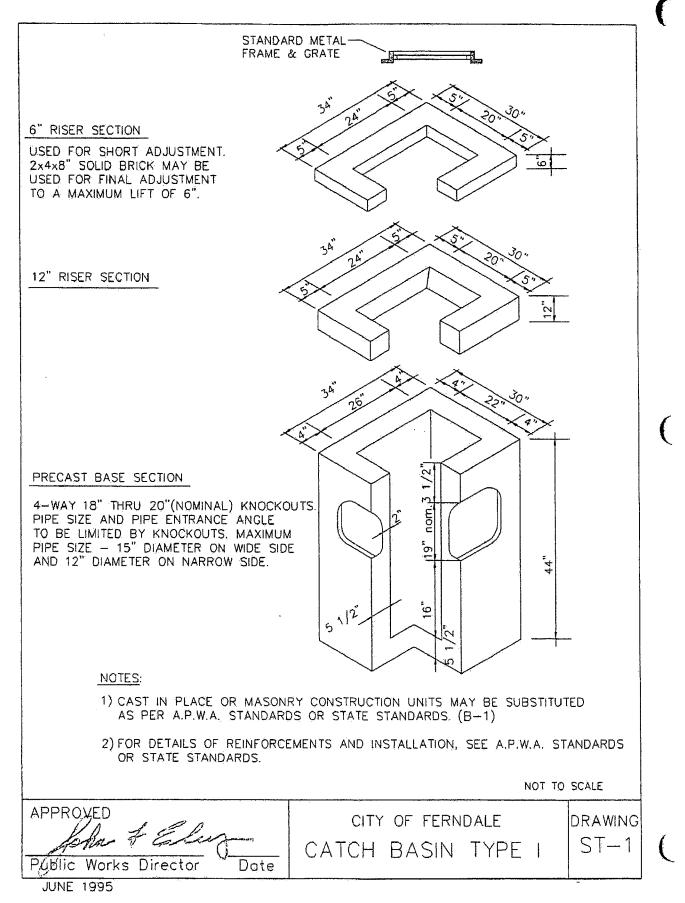
SHEET: 6 of 8

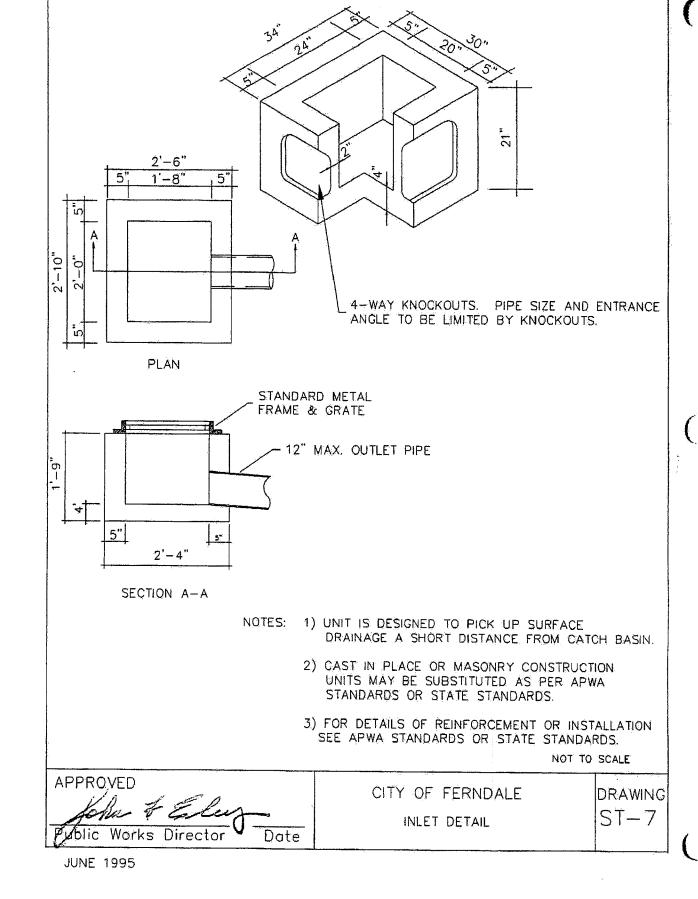


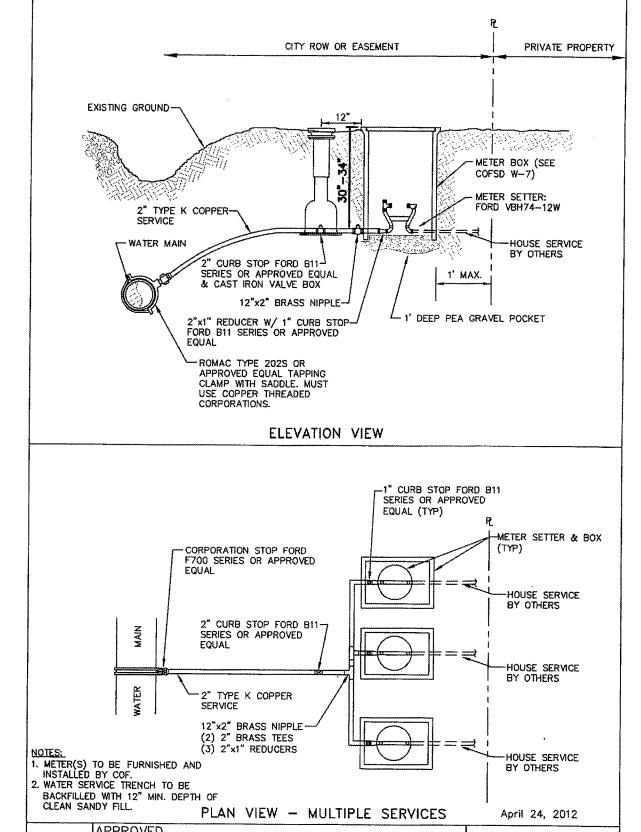


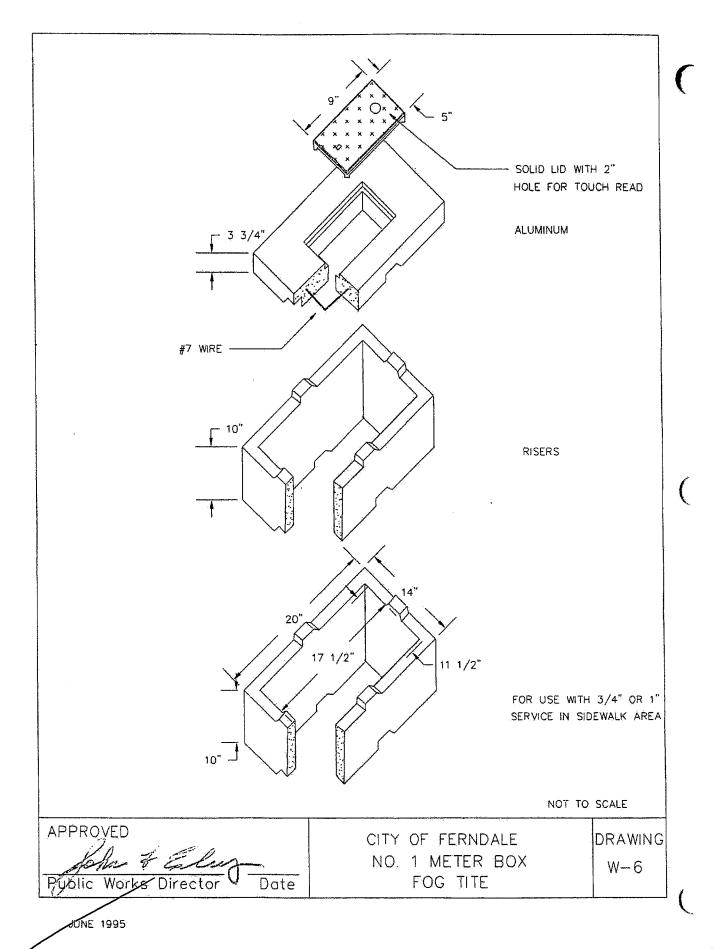


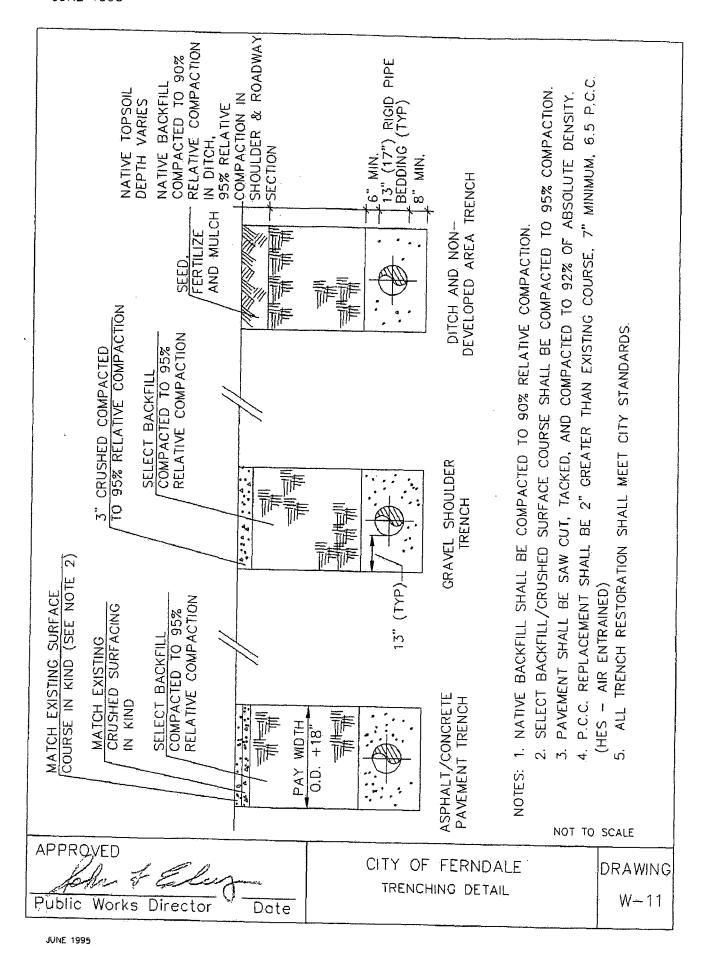


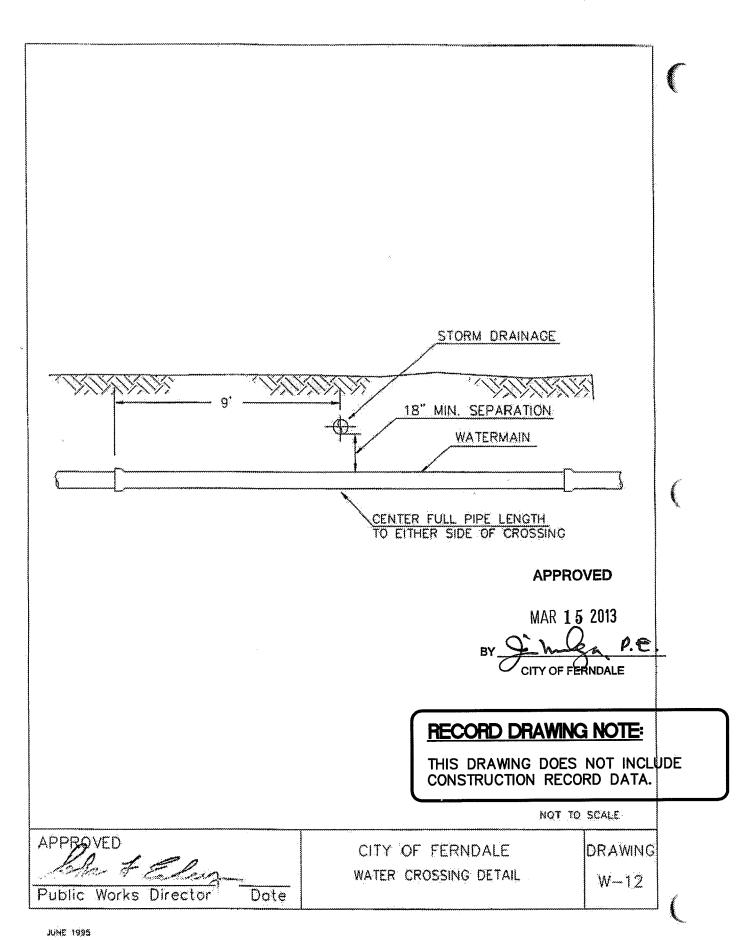






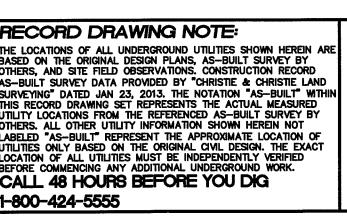






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Public Works Director



TYPICAL 2' WATER

SERVICE WITH 1' METER

NOT TO SCALE



125 WEST KELLOGG ROAD, BELLINGHAM, WA 98226 Ph: (360) 671-7002 Fax: (360) 671-7081

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DJ + DJ CONTRACTING INC 7231 SECLUDED LANE FERNIDALE, WA 98248

# STANDARD DETAILS

4 UNIT TOWNHOUSE SITE DEVELOPMENT 1980 SOMERSET STREET, FERNDALE, WA A PORTION OF SECTION 20, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET: 8 of 8

C-8

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DATE: H: 1"=10' V: NA APRIL 2012