

CHRIST LUTHERAN CHURCH, E.L.C.A.

5904 VISTA DRIVE
FERNDALE, WA 98248

LIST OF CONTACTS:

APPROVAL AGENCY:
CITY OF FERNDAL
2095 MAIN STREET
FERNDAL, WA 98248

ENGINEERING FIRM:
2020 ENGINEERING, INC.
814 DUPONT STREET
BELLINGHAM, WA. 98225
ENGINEER: MARK BUEHRER, PE
PHONE: (360) 671-2020

OWNER:
CHRIST LUTHERAN CHURCH, ELCA
5904 VISTA DRIVE
FERNDAL, WA 98248

5904 Vista Dr, Ferndale, WA 98248

SURVEYOR:
LANNY STEELE & ASSOCIATES
1334 KING ST #1
BELLINGHAM, WA. 98229
(360) 676-9350
CONTACT: LAWRENCE STEELE

NATURAL GAS:
CASCADE NATURAL GAS
1600 IOWA STREET
BELLINGHAM, WA. 98229

SERVICES:

WATER / SEWER:
CITY OF FERNDAL
2095 MAIN STREET
FERNDAL, WA. 98248

ELECTRICITY:
PUGET SOUND ENERGY
10885 NE 4TH STREET
P.O. BOX 97034
BELLEVUE, WA. 98009
PH: (888) 321-7779

FIRE PROTECTION:
WHATCOM COUNTY FIRE
DISTRICT #7
P.O. BOX 1599
FERNDAL, WA. 98248

HORIZONTAL DATUM:

CITY OF FERNDAL (NAD 83/91)
BASIS OF BEARINGS AND COORDINATES:
HELD POSITION OF 'FERN 6', WITH RECORD INVERSE
TO 'FERN 3', BEARING: N01°53'08"E, 4672.29'(4672.35')

VERTICAL DATUM:

CITY OF FERNDAL (NGVD 29)
HELD "FERNDAL 05" AS PUBLISHED.

LEGAL DESCRIPTION:

PARCEL A:

A TRACT IN THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 19, TOWNSHIP 39 NORTH, RANGE 2 EAST OF W.M., LYING AND BEING EAST OF THE BLAINE-FERNDAL ROAD (NOW VISTA DRIVE, A STREET IN THE TOWN OF FERNDAL), DESCRIBED AS FOLLOWS, TO-WI:

COMMENCING AT THE QUARTER CORNER COMMON TO SECTIONS 19 AND 20, TOWNSHIP 39 NORTH, RANGE 2 EAST OF W.M., RUNNING THENCE WEST 200 FEET TO THE TRUE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED; THENCE NORTH 01°40'29" EAST 480.83 FEET; THENCE WEST 495.43 FEET TO THE EASTERLY LINE OF THE RIGHT-OF-WAY OF THE BLAINE-FERNDAL ROAD (NOW VISTA DRIVE); THENCE SOUTH 20°28' EAST, ALONG SAID EAST RIGHT-OF-WAY OF BLAINE-FERNDAL ROAD 9NOW VISTA DRIVE) 513 FEET; THENCE EAST 302 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPT VISTA DRIVE, AND EXCEPT SEAMOUNT DRIVE.

SITE INFORMATION:

PROPERTY ADDRESSES:
5904 VISTA DRIVE
FERNDAL, WA 98248

PROPERTY ZONING:
RS MEDIUM-SINGLE FAMILY DWELLING

TAX PARCEL NUMBER:
3902195263250000

SHEET LIST:

SHT#	TITLE
C100	COVER SHEET
C110	GENERAL NOTES
C120	CIVIL NOTES
C200	SURVEY
C210	SURVEY
C220	EXISTING CONDITIONS PLAN
C300	DEMOLITION PLAN
C400	T.E.S.C. PLAN
C410	T.E.S.C. DETAILS
C500	SITE PLAN
C600	GRADING & DRAINAGE PLAN
C700	UTILITY PLAN
C800	ROADWAY PLAN AND PROFILE
C810	ROADWAY CROSS SECTION AND DETAILS
C900	CIVIL DETAILS
C910	CIVIL DETAILS
C920	CIVIL DETAILS
C930	CIVIL DETAILS

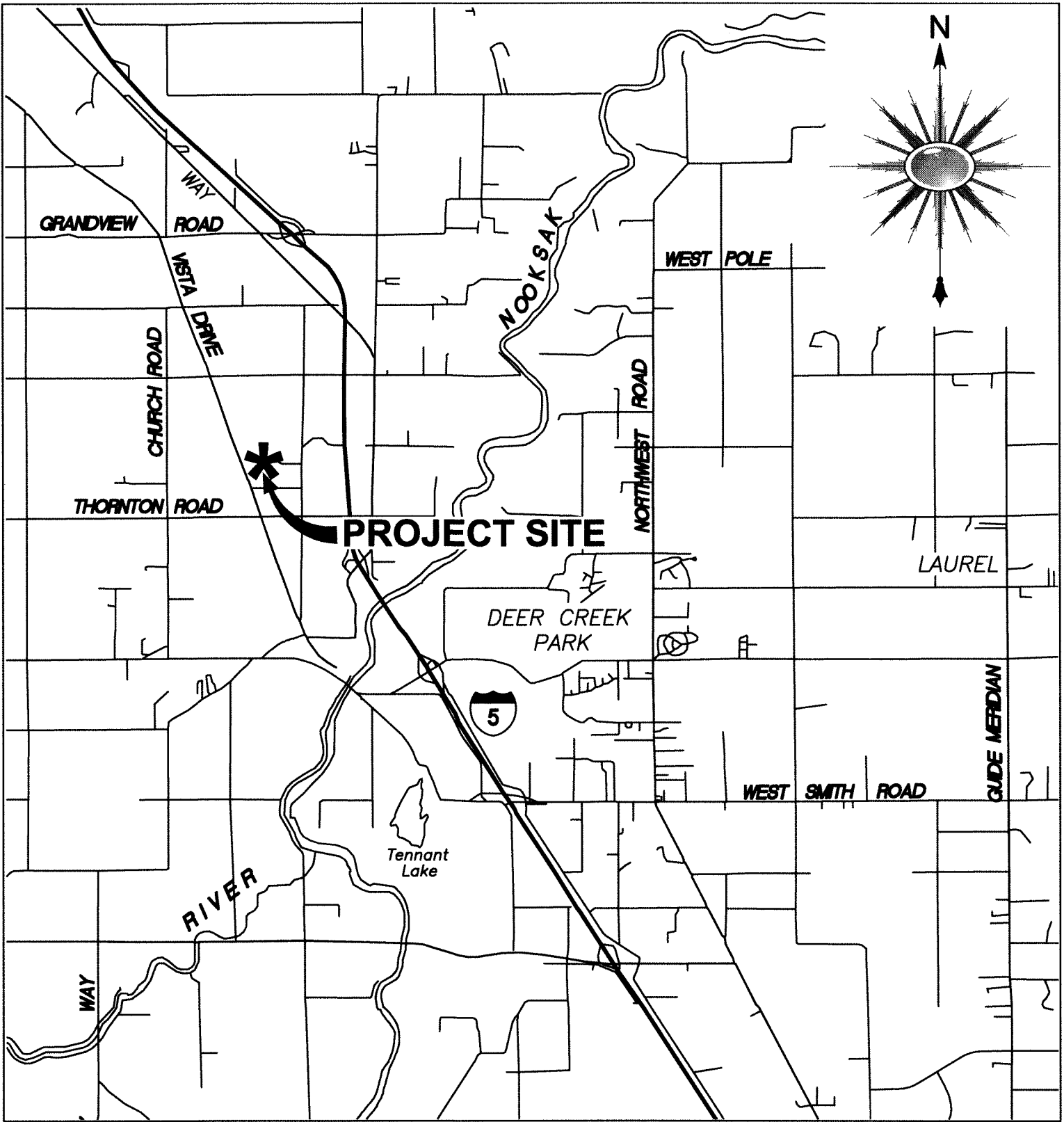
ABBREVIATIONS:

AC	ACRE(S)	R	CURVE RADIUS (TYPICAL)
ADD'L	ADDITIONAL	ROW	RIGHT-OF-WAY
BLDG	BUILDING	SD	STORM DRAIN (PIPE)
BMP	BEST MANAGEMENT PRACTICES	SHLD	SHOULDER
BOT	BOTTOM	SS	SANITARY SEWER
BS	BOTTOM OF STEP	SO	SOUTH
BW	BOTTOM OF WALL	STA	STATION (ALONG ROAD ALIGNMENT)
CL	CENTER LINE OR CLEARING LIMITS	TB	THRUST BLOCK
COF	CITY OF FERNDAL	TC	TOP OF CURB
CO	CLEANOUT	TP	TOP OF STEP
CONC	CONCRETE	TS	SURVEY MARK (TURNING POINT)
Ø	DIAMETER	TW	TOP OF WALL
DS	DOWNSPOUT	TYP	TYPICAL
DI	DUCTILE IRON	(V)	VERTICAL (SCALE VALUE)
E	EAST	WA	WATER
EP	EDGE OF PAVEMENT		
EL	ELEVATION		
EX	EXISTING		
FF	FINISHED FLOOR		
FG	FINISHED GRADE		
FL	FLOWLINE		
IE	INVERT ELEVATION		
INV	INVERT		
FF	FINISHED FLOOR (ELEVATION)		
(H)	HORIZONTAL (SCALE VALUE)		
LF	LINEAR FEET		
LS	LANDSCAPE / LANDSCAPING		
MAX	MAXIMUM		
MIN	MINIMUM		
N	NORTH		
NTS	NOT TO SCALE		
PERF	PERFORATED		
PC	POINT OF CURVATURE		
PCC	POINT OF COMPOUND CURVATURE		
PL	PROPERTY LINE		
POC	POINT OF CONNECTION		
PRC	POINT OF REVERSE CURVATURE		
PRKG	PARKING		
PT	POINT OF TANGENCY (TO CURVE)		
PVMT	PAVEMENT		

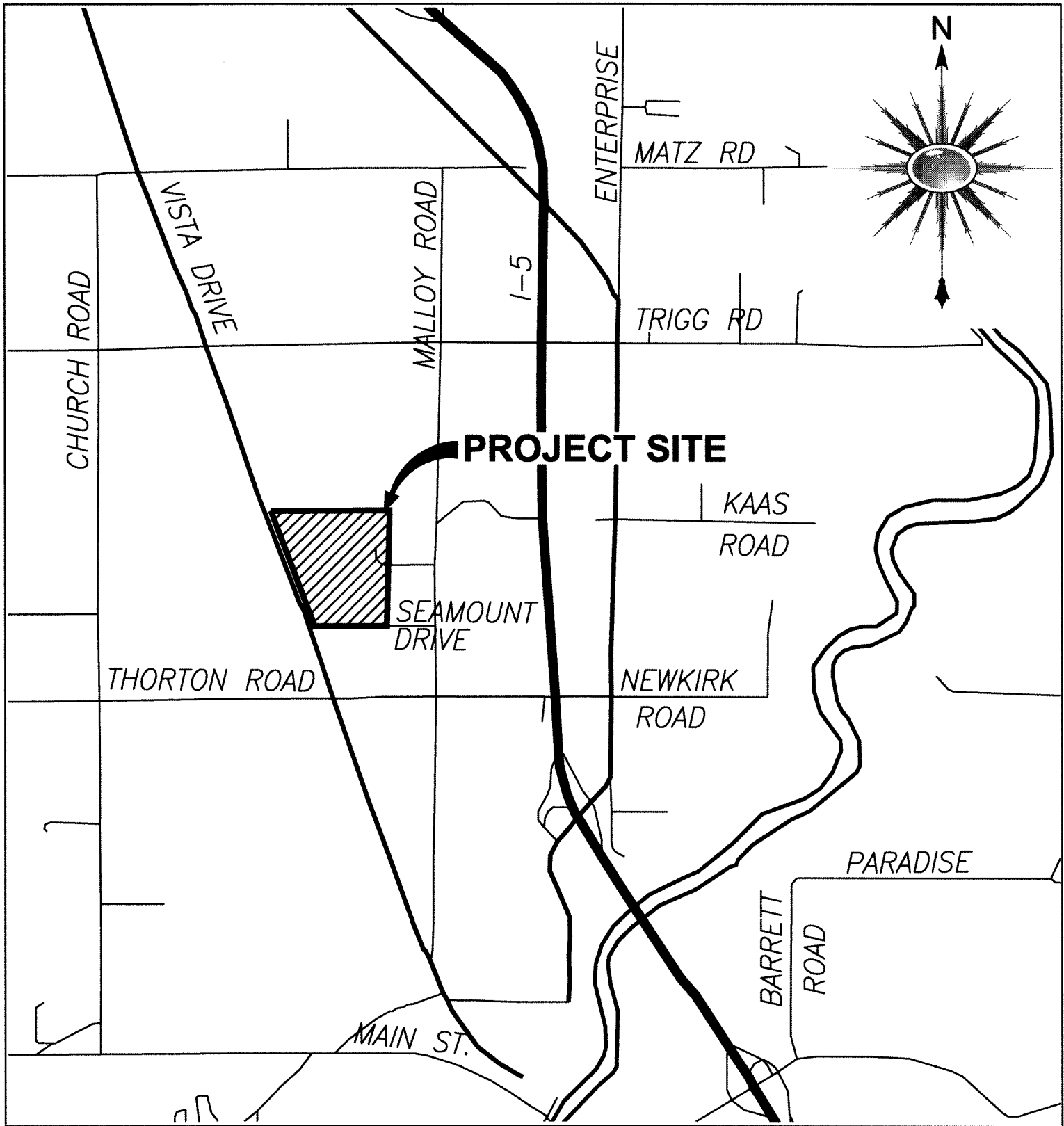
ACCESS REQUIREMENT

ALL PROPOSED CIVIL IMPROVEMENTS IDENTIFIED ON THE CHRIST LUTHERAN CHURCH CIVIL PLAN SET PREPARED, STAMPED, AND DATED BY MARK BUEHRER, PE ON MAY 11TH, 2018, AND APPROVED BY THE CITY OF FERNDAL ON MAY 11TH, 2018, WILL BE COMPLETED, INSPECTED, AND APPROVED BY THE CITY NO LATER THAN AUGUST 15, 2018, TO AVOID VARIOUS TRAFFIC CONTROL AND PUBLIC SAFETY CONCERNS. THIS SECTION OF SEAMOUNT IS VITAL TO SCHOOL BUS TRAFFIC TO AND FROM FERNDAL HIGH SCHOOL AND DISRUPTION TO THIS ACCESS MUST BE AVOIDED AT ALL COSTS. FAILURE TO MEET THIS TIME LIMITATION REQUIREMENT MAY RESULT IN THE CITY'S DETERMINATION THAT THE ONGOING WORK REPRESENTS A NUISANCE CONDITION PER FERNDAL MUNICIPAL CODE 8.08, AS WELL AS A FAILURE TO ADEQUATELY MAINTAIN THE REQUIRED INFRASTRUCTURE PER FMC 12.16. WERE THE CITY TO MAKE THIS DETERMINATION, A NOTICE OF VIOLATION WILL BE ISSUED PURSUANT TO FERNDAL MUNICIPAL CODE 1.12, AND MAY RESULT IN ADDITIONAL FEES AND PENALTIES CONSISTENT WITH CURRENT CITY MUNICIPAL CODE POLICY. APPLICANT SIGNATURE ON, AND/OR ISSUANCE OF, ALL APPLICABLE CITY PERMITS FOR THE CHRIST LUTHERAN CHURCH PROJECT INDICATES FULL UNDERSTANDING AND ACKNOWLEDGEMENT OF THIS CONDITION BY THE APPLICANT.

SECTION 19, T. 39 N., R. 2 E., W.M., WHATCOM CO. WA.



VICINITY MAP
1" = 5000'



APPROVED
LOCATION MAP
1" = 2000'

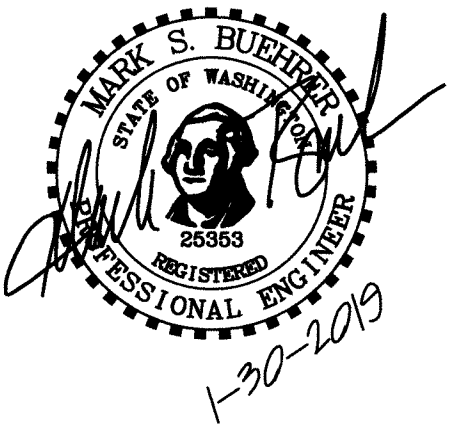
JAN 30 2019
for KEVIN RENTZ
CITY OF FERNDAL
PUBLIC WORKS DEPARTMENT

ENGINEER'S CERTIFICATION:
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDAL DEVELOPMENT STANDARDS, THE CITY OF FERNDAL MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.



RMC ARCHITECTS

2020
ENGINEERING



RECORD
DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUYP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

COVER

C100

RMC Architects, PLLC - 1223 Railroad Avenue - Bellingham, WA 98225
P:360.676.1733 F:360.738.0446 www.rmcarchitects.com

00661.001 2/1/19 KB

GENERAL NOTES:

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE CITY OF FERNDALE STANDARDS AND SPECIFICATIONS, WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, AND THE WSDOT HYDRAULICS MANUAL.
- ALL WORK WITHIN THE SITE AND CITY RIGHT-OF-WAY SHALL BE SUBJECT TO THE INSPECTION OF THE CITY INSPECTOR OR ITS DESIGNATED REPRESENTATIVE.
- THE DEVELOPER/PROJECT ENGINEER IS RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM ESTABLISHED BY THE PROJECT ENGINEER AND THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT DIRECTOR.
- THE TEMPORARY EROSION/SEDIMENTATION CONTROL FACILITY SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE APPROVED TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING ARE COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
- ALL BACKFILL IN THE RIGHT OF WAY SHALL BE IMPORTED BANK RUN GRAVEL. TRENCH BACKFILL OF NEW UTILITIES AND STORM DRAINAGE FACILITIES SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY (MODIFIED PROCTOR) UNDER ROADWAYS AND 90% OF MAXIMUM DENSITY (MODIFIED PROCTOR) OFF ROADWAYS, AS SPECIFIED IN 1991 WSDOT STANDARD SPECIFICATIONS, SECTION 2-03.3(14)C COMPACTING EARTH EMBANKMENTS METHOD 'B'.
- NON-COMPLIANCE WITH THE EROSION CONTROL REQUIREMENTS, WATER QUALITY REQUIREMENTS OR CLEARING LIMITS VIOLATIONS MAY RESULT IN REVOCATION OF PROJECT PERMITS, PLAN APPROVAL AND/OR BOND FORECLOSURES.
- ALL POTENTIAL POLLUTANTS, INCLUDING BUT NOT LIMITED TO WASH WATER, HUMAN WASTES, CHEMICALS, OILS, FUELS, VEHICULAR LUBRICATION AND COOLING FLUIDS, MISCELLANEOUS TRASH AND WASTE MATERIALS, DEMOLITION DEBRIS, PESTICIDES, HERBICIDES, AND FERTILIZERS SHALL BE HANDLED IN SUCH A MANNER TO PREVENT CONTAMINATION OF STORMWATER. STORED HAZARDOUS MATERIALS SHALL BE PROTECTED FROM VANDALISM, COVERED, AND HAVE SPILL CONTAINMENT IN PLACE, INCLUDING PLASTIC OR OTHER GROUND COVER TO MINIMIZE THE OPPORTUNITY FOR ANY SPILLED MATERIALS TO INFILTRATE INTO THE SOILS.
- ANY SPILLAGE OF HAZARDOUS MATERIALS INTO SURFACE WATERS OR INTO THE GROUND SHALL BE IMMEDIATELY CONTAINED AND REPORTED TO WHATCOM COUNTY, THE CITY OF FERNDALE, THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND OTHER APPROPRIATE STATE OR FEDERAL AUTHORITIES, AND IMMEDIATELY CONTAINED. PESTICIDES, HERBICIDES OR FERTILIZERS SHALL NOT BE APPLIED DURING OR IMMEDIATELY PRIOR TO EXPECTED PRECIPITATION EVENTS, AND APPLICATION SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
- ALL MITIGATION MEASURES IDENTIFIED IN THE CITY'S 01/29/2009 SEPA MITIGATED DETERMINATION OF NON-SIGNIFICANCE (MDNS) SHALL BE MADE CONDITIONS OF THIS APPROVAL.
- ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE IBC AND ALL OTHER APPLICABLE STATE AND LOCAL CODES AND REQUIREMENTS TO THE SATISFACTION OF THE BUILDING DEPARTMENT.
- SHOULD ARCHAEOLOGICAL MATERIALS (e.g. SHELL, MIDDEN, FAUNAL REMAINS, STONE TOOLS OR HUMAN REMAINS) BE OBSERVED DURING PROJECT ACTIVITIES, ALL WORK IN THE IMMEDIATE VICINITY SHALL STOP AND THE AREA SHALL BE SECURED. THE STATE OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION (360-586-3065) AND THE LUMMI NATION TRIBAL HISTORIC PRESERVATION OFFICE (360-384-2298) SHALL BE CONTACTED IMMEDIATELY IN ORDER TO HELP ASSESS THE SITUATION AND DETERMINE HOW TO PRESERVE THE RESOURCE(S). COMPLIANCE WITH ALL APPLICABLE LAWS PERTAINING TO ARCHAEOLOGICAL RESOURCES IS REQUIRED.
- CONTRACTOR TO VERIFY DRY UTILITY CONNECTIONS AND NEEDS WITH UTILITY PROVIDERS.

GENERAL REQUIREMENTS:

- ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE "STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" (WSDOT SPECS.), THE CITY OF FERNDALE DEVELOPMENT STANDARDS (COFDS) AND THE 2005 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOWE MANUAL). IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
- THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m., MONDAY THROUGH SATURDAY.
- THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING IN CONFORMANCE WITH THE EROSION & SEDIMENTATION CONTROL PLAN AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE ONSITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.
- THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND/OR WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CITY WILL SCHEDULE THE MEETING.

- ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, REPRESENTATIVES FROM THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK IDENTIFIED ON THE PLANS, BOTH PUBLIC AND PRIVATE. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOW:
 - PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
 - CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
 - PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS OF WAY OR IN WATERLINE EASEMENT TO BE DEDICATED TO THE CITY OF FERNDALE.
 - PLACING OR BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY, IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE, OR OTHER PUBLICLY SHARED FACILITIES.
 - GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
 - COMPLETION OF EXCAVATION TO SUBGRADE.
 - COMPLETION OF BALLAST COURSE PLACEMENT
 - COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT
 - POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
 - END OF MAINTENANCE PERIOD

- 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. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO PERFORMING THE WORK. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23- TRAFFIC CONTROL, SHALL APPLY.
- THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.

- AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDALE DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.

UNDERGROUND UTILITIES CONSTRUCTION:

- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, WATER SERVICE TAPS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL THE PROJECT ENGINEER AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY.
- THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
 - NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
- UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS.
- ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED WITH ¾-INCH MINUS OR 5/8-INCH MINUS WELL GRADED CRUSHED ROCK.
- TESTING OF NEW WATER LINES, STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
- ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95% DENSITY IN LIFTS NOT TO EXCEED 24 INCHES WITH A "HOE PACK, OR 8 INCHES WITH HAND-OPERATED COMPACTION."
- OPEN CUTTING OF EXISTING ROADWAYS IS ONLY ALLOWED AS APPROVED AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE FERNDALE STANDARD TRENCH DETAIL(S). ALL UTILITY TRENCHES UNDERNEATH AN EXISTING ROADWAY SHALL BE BACKFILLED WITH 150 PSI CONTROLLED DENSITY FILL.
- NO PART OF THE DRAINAGE SYSTEM MAY BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY INSPECTOR.

EARTHWORK:

- THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UN-COMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
- THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
- UNSUITABLE MATERIAL FOUND AND NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
- THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES & CRUSHED SURFACING:

- GRAVEL BASES AND BALLAST MATERIAL GRADATION SHALL MEET WSDOT STANDARD SPECIFICATIONS.
- BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
- THE GRADED AND COMPACTED SURFACE OF THE CRUSHED SURFACING TOP COURSE SHALL BE WITHIN ½ INCH OF FINISHED GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL AND COMPACTION TESTING. PRIOR TO IMPORTING OF MATERIAL FOR BASE AND CRUSHED SURFACING TOP COURSE THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

STORM DRAINAGE:

- THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:

CATCH BASINS TYPE 1, 1L OR 2	WSDOT STD. DETAILS B-5.20, B-5.40 OR B-10.20
"RESIDENTIAL SERVICE LINE"	COFSD ST-7 (CITY OF FERNDALE STD DETAIL)
CATCH BASINS	
- STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP), ALL OTHER STORM SEWER PIPE SHALL BE PVC.
- ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS"
- CONTROL DENSITY FILL SHALL BE USED IN AREAS WHERE LESS THAN 18" OF COVER IS MAINTAINED OVER THE PROPOSED STORM PIPES (PIPE IS IN ROAD BASE SECTION), AS SHOWN IN THE PLANS. DUCTILE IRON PIPE MAY BE USED FOR STORM PIPES WITH LESS THAN 18" OF COVER IF APPROVED BY THE CITY.
- COVER OVER PIPES SHALL BE MAINTAINED DURING CONSTRUCTION. DEPTH OF COVER REQUIRED SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS AND WILL VARY WITH THE VEHICLE LOADS TRAVELING OVER THE PIPE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR DAMAGE TO PIPE DURING CONSTRUCTION ACTIVITIES.
- AT THE END OF ALL SITE CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM CATCH BASINS AND STORMWATER CONVEYANCES. DEBRIS SHALL NOT BE ALLOWED TO ENTER STREAMS OR OTHER WATER BODIES.

WATER:

- THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:

PIPE BEDDING	COFSD W-11
TRENCH BACKFILL	COFSD W-11
FIRE HYDRANT ASSEMBLY	COFSD W-1
THRUST BLOCKING	COFSD W-2, W-3 & W-4
WATER SERVICE	COFSD W-5

- ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF WSDOT STANDARD SPECIFICATIONS.
- ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, MINIMUM THICKNESS CLASS 50, PER AWWA STANDARDS H3-71 AND C151-71, WITH CEMENT LINING PER AWWA STANDARD C104-71.
- 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 AWWA SPECIFICATIONS C-110-71 AND C-104-71.
- CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE 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.
- CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.
- ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-09.3(23) AND SECTION 7-09.3(24) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION - CURRENT EDITION. HYDROSTATIC TEST PRESSURE FOR WATER MAIN ACCEPTANCE SHALL BE 250 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. THE CITY OF FERNDALE LABORATORY SHALL CONDUCT ALL DISINFECTION TESTS AND BACTERIOLOGICAL TESTS. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.

- BACKFILL SHALL BE GRAVEL BASE, CLASS B, IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF OPTIMUM DENSITY.
- ALL PIPE SHALL HAVE A MINIMUM COVER OF 36", AND A MAXIMUM OF 42".
- ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES. GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 10 INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NON-SHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NON-RISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS. VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.

- WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE COFDS W-5.
- FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFDS- SD W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
 - FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE M.H. 929T HYDRANTS.
 - FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.
 - IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2' OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
 - UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 250 PSI. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
 - FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD:

- THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:

TYPICAL STREET SECTION (PER PROJECT)	
PCC CURB AND GUTTER	COFSD R-9
PCC SIDEWALKS	COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
PCC CURB RAMPS	WSDOT STD. DETAIL F-40.
- ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.05-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.
- THE OWNER SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTION OF THE GRAVEL BASE UNDER ALL PAVING AREAS.
- ASPHALT CONCRETE PAVEMENT SHALL BE CLASS "B" MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 5-04, EXCEPT AS MODIFIED HEREIN. CONNECTION TO EXISTING PAVEMENT SHALL BE TO A STRAIGHT NEATLY-TRIMMED LINE.
- CRUSHED ROCK SURFACING FOR PAVEMENT SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 9-03.9(3); BALLAST PER SECTION 9-03.9(1).
- CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 6-02.3(2)B.
- CEMENT CONCRETE SIDEWALK SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH CITY STANDARDS, DRAWING NO. R-12.
- CEMENT CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK AND CONSTRUCTED WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH THE CITY STANDARDS, DRAWING NO. R-15. A 2- INCH LATER OF ¾ INCH DRAIN ROCK SHALL BE USED FOR DRIVEWAY BEDDING.
- CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNED BY THE ENGINEER, IN ACCORDANCE WITH WSDOT STANDARDS SPECIFICATIONS, SECTION 8-04 AND CITY OF FERNDALE STANDARDS, DRAWING R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD PLANS F-40. WHERE NEW CEMENT CONCRETE CURB AND GUTTER IS CONNECT TO EXISTING CURB AND GUTTER, ASSURE THAT NO ABRUPT OFFSETS IN LINE OR GRADE SHALL BE CONSTRUCTED WHICH WILL BE UNSIGHTLY OR IMPEDE FLOW IN THE GUTTER LINE.
- PAVEMENT:
 - SOIL RESIDUAL HERBICIDE SHALL BE LAYED WITHIN 24 HOURS OF PAVING.
 - A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
 - ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLANE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETROTAC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
- THRU-CURB BASINS AND THRU-CURB INLETS CONFORMING TO THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-05 SHALL BE CONSTRUCTED AT THE LOW POINT OF THE CURB FLOW LINES AND TO THE LOCATIONS, DIMENSIONS, AND DETAILS AS SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER AND CITY STANDARDS, DRAWING NO. R-8.
- TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-08.
- STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 7-04. MATERIAL SHALL BE HANCOR SURE-LOK F477 PIPE OR CITY APPROVED EQUAL. LOTS' STORM DRAIN SERVICE LINE SHALL BE 6" PVC PER WSDOT STANDARD SPECIFICATION, SECTION 9-05.1(5)
- PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT STANDARD SPECIFICATION 7-01.3(2).

SANITARY SEWER SYSTEMS:

- 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 SPECIFICATIONS, MOST RECENT EDITIONS. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL.
- ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE PERFORMED IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.
- SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE (SDR-35) CONFORMING TO THE PROVISIONS OF ASTM D 3034 AND INSTALLED TO CITY SPECIFICATIONS.
- SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL WITHIN CITY RIGHT OF WAY AND TRAVELED WAYS OUTSIDE OF RIGHT OF WAY (ACCESS EASEMENTS) AND SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% MODIFIED PROCTOR. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.
- ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAILS AND SHALL BE PRE-CHANNELED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
- ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAILS SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4".
- CONTRACTOR SHALL EXTEND SEWER STUBS 5 FT BEYOND UTILITY CORRIDOR OR 15 FEET BEYOND RIGHT-OF-WAY LINE.
- EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENCILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

RMC ARCHITECTS

2020 ENGINEERING

RECORD DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No:	1404	Date:	30 JAN 2019
File No:			
Drawn By:	M. CUPP		
Checked By:	M. BUEHRER		
Issued For:	PROJECT RECORD		

GENERAL NOTES

C110



CIVIL NOTES:

1. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND REPORT DISCREPANCIES TO ENGINEER.

NPDES AND CESCL NOTES:

1. THE CONTRACTOR SHALL KEEP A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE IMPLEMENTED.
2. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) AND/OR NPDES INSPECTOR, MAINTAINED AND REPAIRED BY THE CONTRACTOR AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES PER 24 HOUR PERIOD. AN INSPECTION REPORT FILE SHALL BE MAINTAINED BY THE CONTRACTOR AND THE CESCL.

TEMPORARY EROSION/SEDIMENTATION CONTROL NOTES:

1. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
2. APPROVAL OF THESE TEMPORARY EROSION/SEDIMENTATION CONTROL (TESC) PLANS 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.).
3. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
4. 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.
5. THE TESC 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 STANDARDS.
6. THE TESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
8. 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 TESC METHODS (E.G., SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.).
9. ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
10. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
11. 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 DOWNSTREAM SYSTEM.
12. 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 DURATION OF THE PROJECT.
13. DURING THE TIME PERIOD OF OCTOBER 1 THROUGH APRIL 30, 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 OR PLASTIC COVERING.
14. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM WHICH BACKS UNDER OR INTO A POND SHALL BE USED AS A TEMPORARY SETTLING BASIN.
15. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
16. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.
17. ALL EROSION/SEDIMENTATION CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6 INCHES MUST HAVE SLOPES NOT STEEPER THAN 3H:1V.
18. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
19. EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY INSPECTOR.

SEEDING NOTES:

1. SEEDBED PREPARATION MAY INCLUDE THE FOLLOWING:
- A. IF INFERTILE OR COARSE TEXTURED SUBSOIL WILL BE EXPOSED DURING GRADING, STOCKPILE TOPSOIL AND RE-SPREAD IT OVER THE FINISHED SLOPE AND ROLL IT TO PROVIDE A FIRM BASE.
- B. IF CONSTRUCTION FILLS HAVE LEFT SOIL EXPOSED WITH A LOOSE, ROUGH OR IRREGULAR SURFACE, TRACK WALK UP SLOPE.
- C. IF CUTS OR CONSTRUCTION EQUIPMENT HAVE LEFT A TIGHTLY COMPACTED SURFACE, BREAK WITH CHISEL PLOW OR OTHER SUITABLE EQUIPMENT.
- D. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPES (CONTOURED). THE SEEDBED SHOULD BE FIRM WITH A FAIRLY FINE SURFACE AFTER ROUGHENING.
2. FERTILIZATION - AS PER SUPPLIER'S RECOMMENDATIONS. DEVELOPMENTS ADJACENT TO WATER BODIES MUST USE NON-PHOSPHOROUS FERTILIZER.
3. HYDROSEEDING APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE USED.
4. SEEDING - APPLY APPROPRIATE MIXTURE TO THE PREPARED SEEDBED AT A RATE OF 120 LBS/ACRE. COVER THE SEED WITH TOPSOIL OR MULCH NO DEEPER THAN ONE-HALF INCH.

TEMPORARY EROSION CONTROL SEED MIX	PROPORTIONS BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
CHEWINGS OR RED FESCUE	40%	98	90
ANNUAL OR PERENNIAL RYE	40%	98	90
REDTOP OR COLONIAL BENTGRASS	10%	92	85
WHITE DUTCH CLOVER	10%	98	90

APPROVED

JAN 30 2019
FOR KEVIN RENZ
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

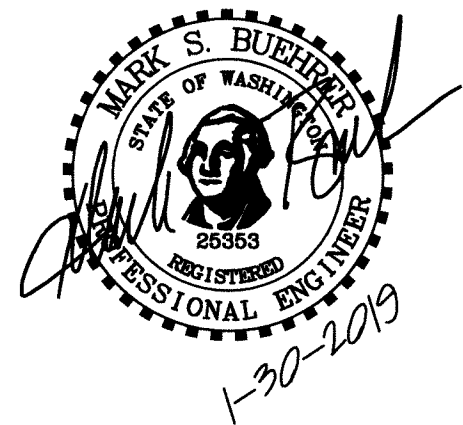
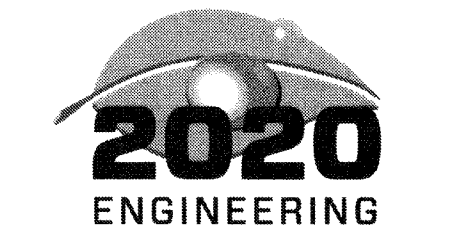
ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.



Know what's below.
Call before you dig.

RMC ARCHITECTS



RECORD
DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

CIVIL NOTES

C120

RECORD
DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

SURVEY

C200



Know what's below.
Call before you dig.

ENGINEER'S CERTIFICATION:

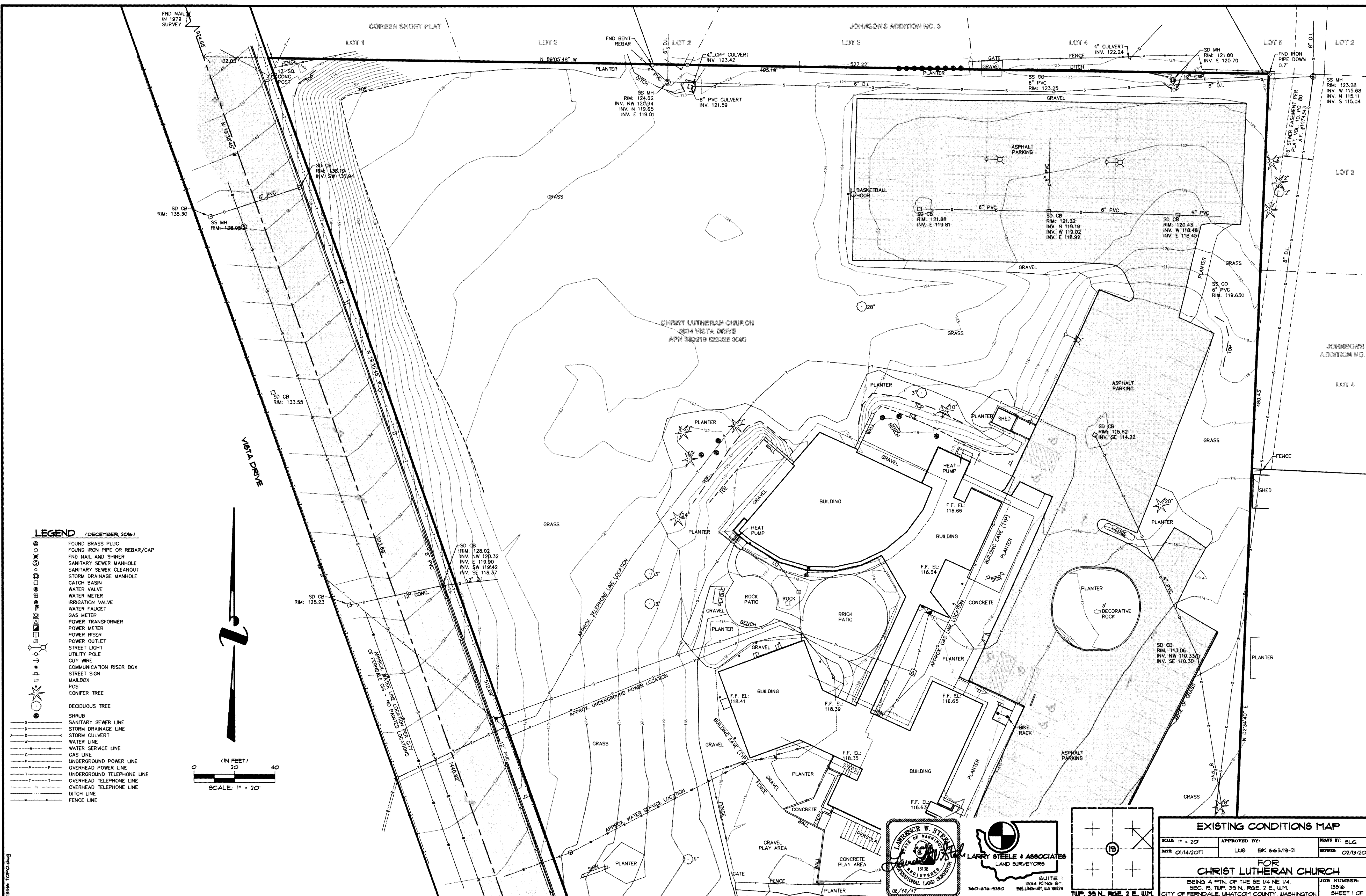
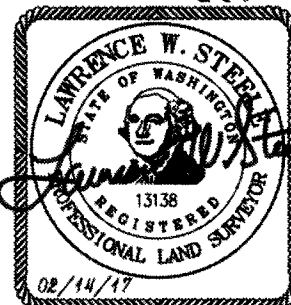
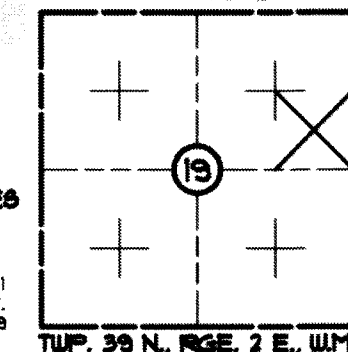
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

APPROVED

JAN 30 2019
BY: *Kevin Renz*
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

EXISTING CONDITIONS MAP

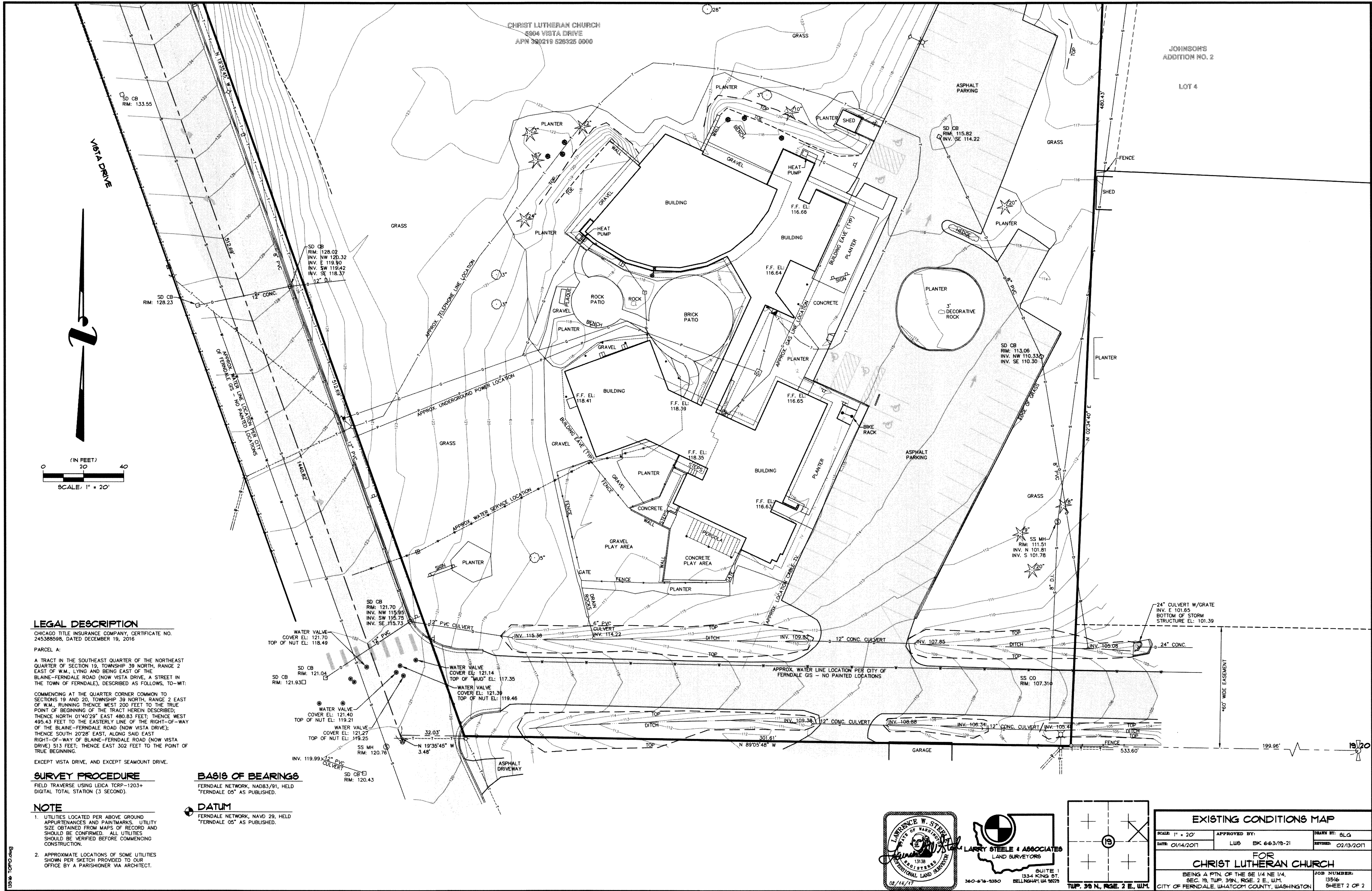
SCALE: 1" = 20'
DATE: 01/14/2017
APPROVED BY: LUB BK 66378-21
FOR
CHRIST LUTHERAN CHURCH
BEING A PTN. OF THE SE 1/4 NE 1/4,
SEC. 19, TWP. 39 N., RGE. 2 E., WM.
CITY OF FERDALE, WHATCOM COUNTY, WASHINGTON

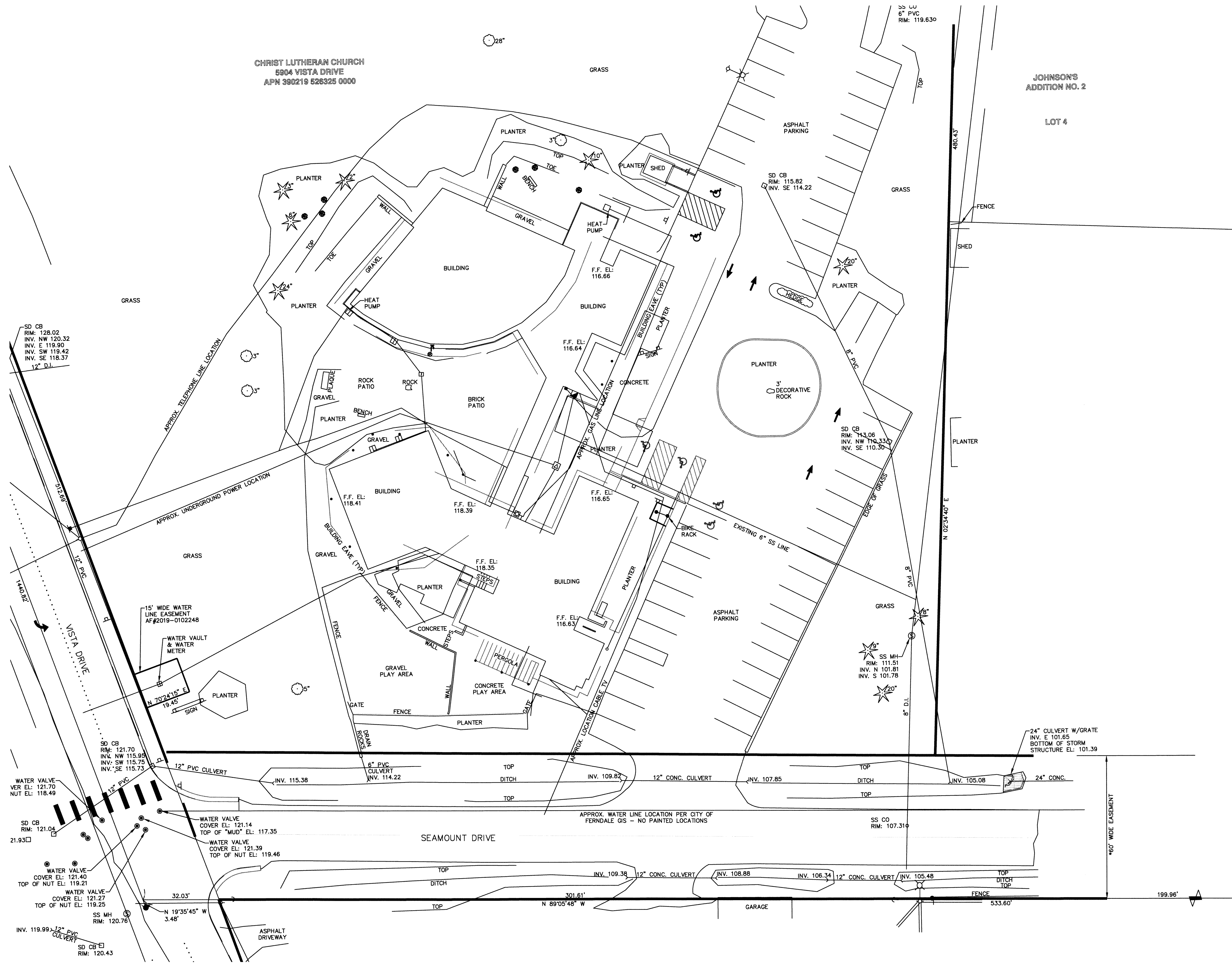


LEGEND (DECEMBER 2016)

- FOUND BRASS PLUG
- FOUND IRON PIPE OR REBAR/CAP
- FND NAIL AND SHINER
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- STORM DRAINAGE MANHOLE
- CATCH BASIN
- WATER VALVE
- WATER METER
- IRRIGATION VALVE
- WATER FAUCET
- GAS METER
- POWER TRANSFORMER
- POWER METER
- POWER RISER
- POWER OUTLET
- STREET LIGHT
- UTILITY POLE
- GUY WIRE
- COMMUNICATION RISER BOX
- STREET SIGN
- MAILBOX
- POST
- CONIFER TREE
- DECIDUOUS TREE
- SHRUB
- SANITARY SEWER LINE
- STORM DRAINAGE LINE
- STORM CULVERT
- WATER LINE
- WATER SERVICE LINE
- GAS LINE
- UNDERGROUND POWER LINE
- OVERHEAD POWER LINE
- UNDERGROUND TELEPHONE LINE
- OVERHEAD TELEPHONE LINE
- OVERHEAD TELEPHONE LINE
- DITCH LINE
- FENCE LINE

SCALE: 1" = 20'

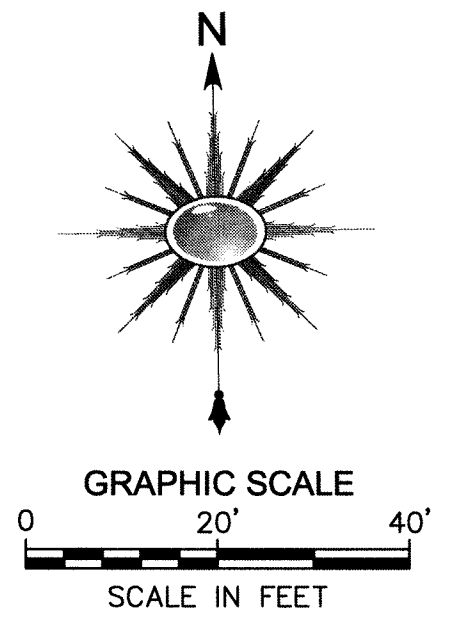




CHRIST LUTHERAN CHURCH
5904 VISTA DRIVE
APN 390219 526325 0000

JOHNSON'S
ADDITION NO. 2

LOT 4

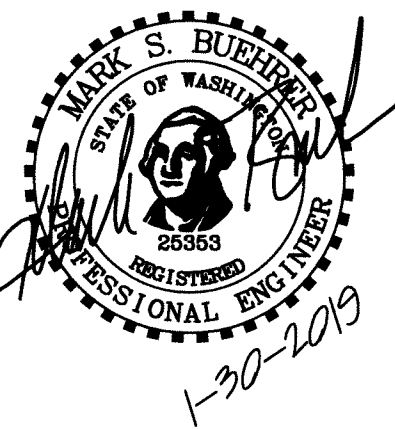


NOTES:

1. EXISTING CONDITION PLAN INCLUDES INFORMATION NOT INCLUDED IN ORIGINAL SURVEY
2. THE CITY REQUIRES THE APPLICANT/CONTRACTOR TO POTHOLE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALTHOUGH UTILITIES AND LOCATIONS DEPICTED ON THE PLAN SHEET APPEAR TO BE ACCURATE THE CITY CANNOT GUARANTEE INFORMATION THAT MAY HAVE BEEN GATHERED FOR UTILITIES IN OUR DATA BASE. PRIMARILY IN THE OLDER SECTIONS OF THE CITY IS ACCURATE. THE CONTRACTOR IS ADVISED TO PROCEED WITH DUE DILIGENCE AND OR CAUTION WHEN EXCAVATING FOR AND OR CONNECTING TO EXISTING UTILITIES NECESSARY FOR YOUR PROJECT. THE CITY WILL MAKE EVERY EFFORT TO ACCOMMODATE IF SITUATIONS ARISE FROM UNKNOWN OR INACCURATELY DOCUMENTED UTILITIES BUT WILL NOT ASSUME ANY FINANCIAL LIABILITY IF SUCH CONFLICTS ARISE.

RMC ARCHITECTS

2020
ENGINEERING



RECORD
DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

EXISTING
CONDITIONS PLAN

C220

APPROVED

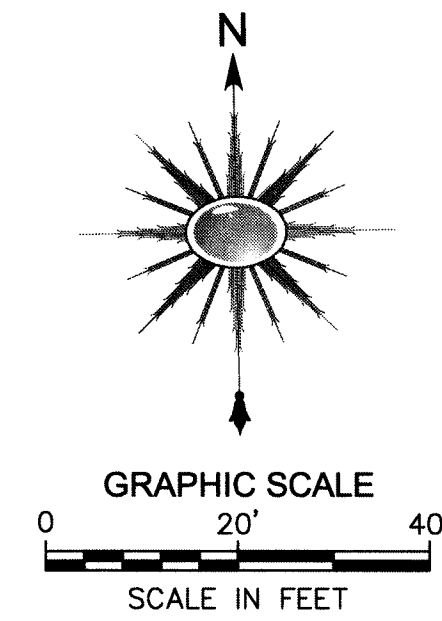
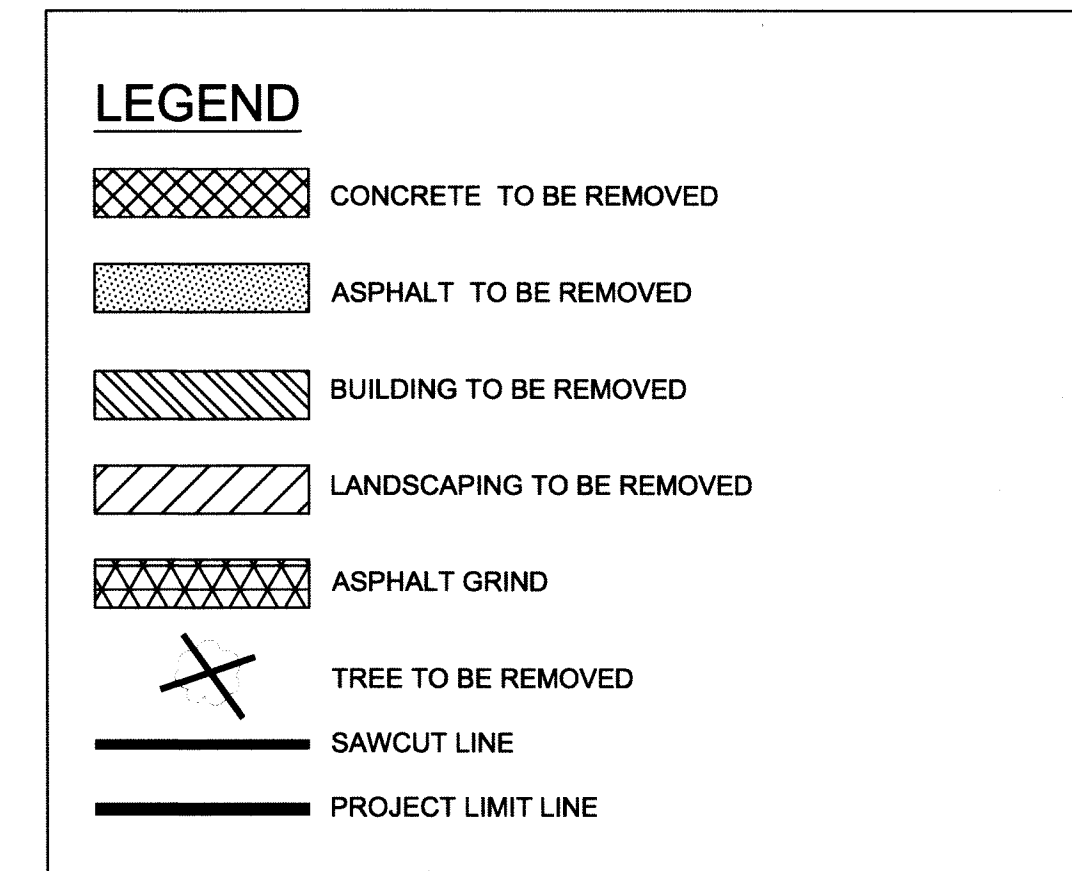
JAN 30 2019
BY: *Mark S. Buehrer*
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT



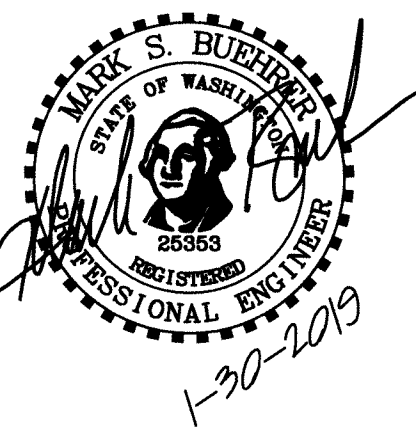
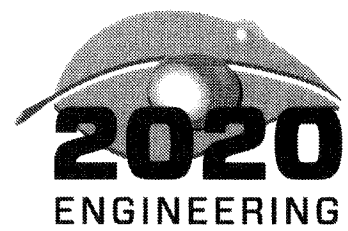
Know what's below.
Call before you dig.

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.



RMC ARCHITECTS



RECORD DRAWING

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

Job No:	1404	Date:	30 JAN 2019
File No:			
Drawn By:	M. CUPP		
Checked By:	M. BUEHRER		
Issued For:	PROJECT RECORD		

APPROVED

JAN 8 0 2019
 BY *[Signature]* FOR KEVIN RENZ
 CITY OF FERDALE
 PUBLIC WORKS DEPARTMENT

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

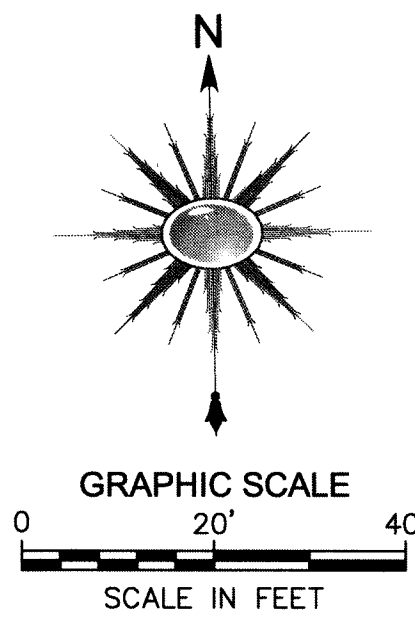
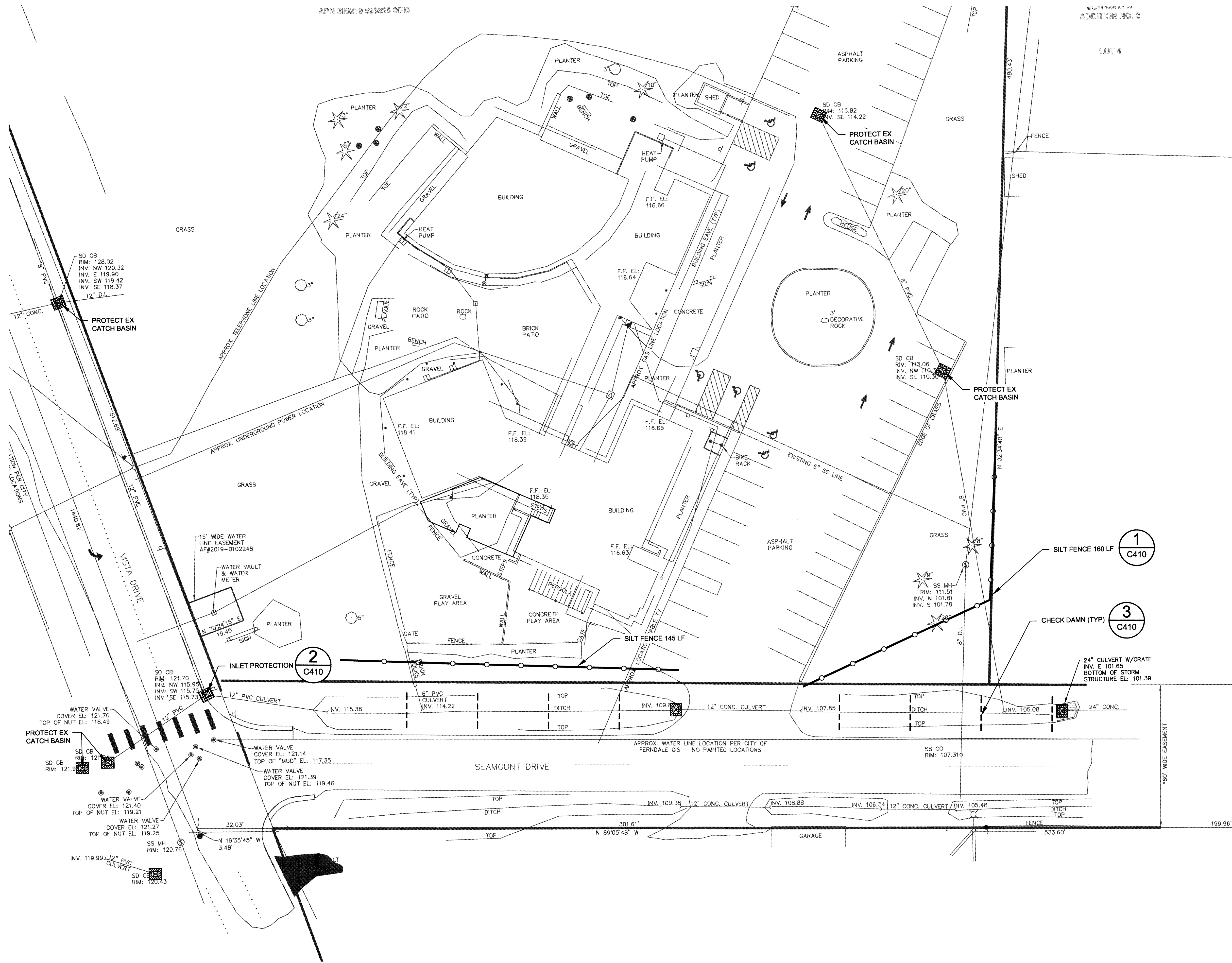


Know what's below.
Call before you dig.

DEMOLITION PLAN

C300

00661.007 2/1/19 KB

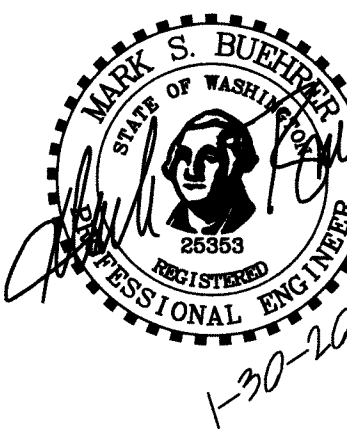


LEGEND

- SILT FENCE
- INLET PROTECTION

RMC ARCHITECTS

2020
ENGINEERING



**RECORD
DRAWING**

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

APPROVED

FOR KEVIN IZENZ
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

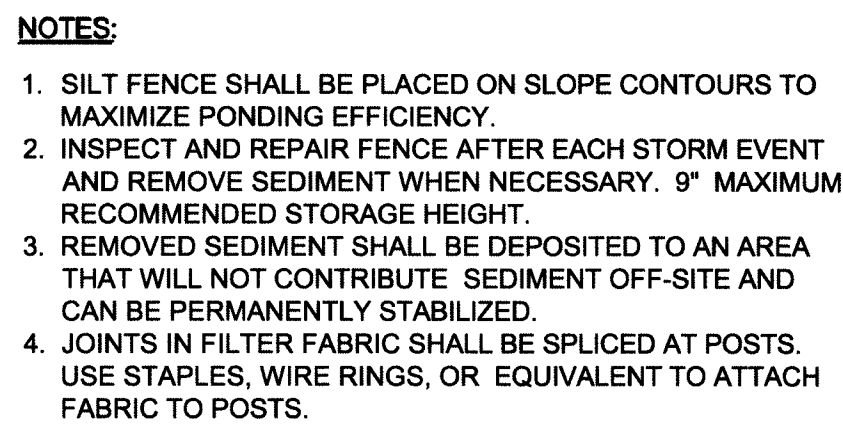


ENGINEER'S CERTIFICATION:

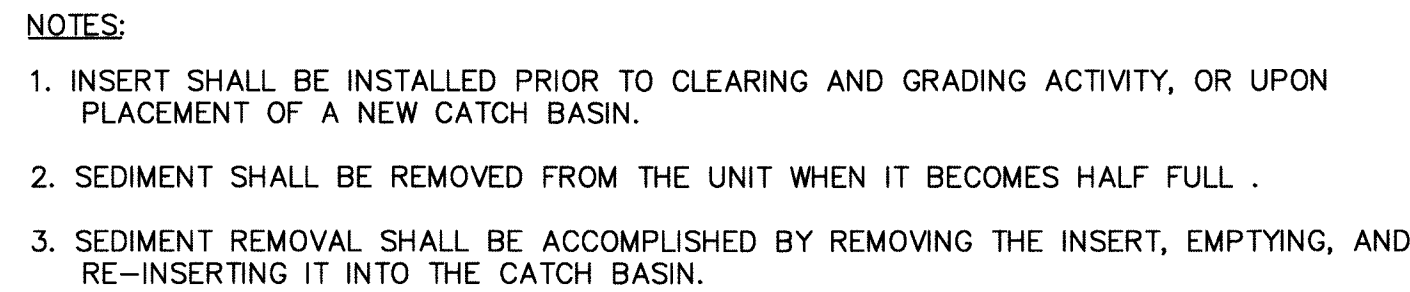
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

T.E.S.C. PLAN

C400



1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
2. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS (WHERE FEASIBLE). THE FENCE POSTS SHALL BE SPACED AT A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
3. A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE AND 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES, AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH, A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE 5 APPLYING.
7. THE TRENCH SHALL BE BACKFILLED WITH 3/4-INCH MINIMUM DIAMETER WASHED GRAVEL.
8. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
9. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

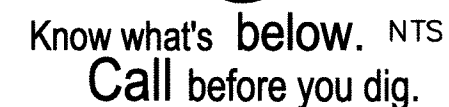


NTS



ENGINEER'S CERTIFICATION:

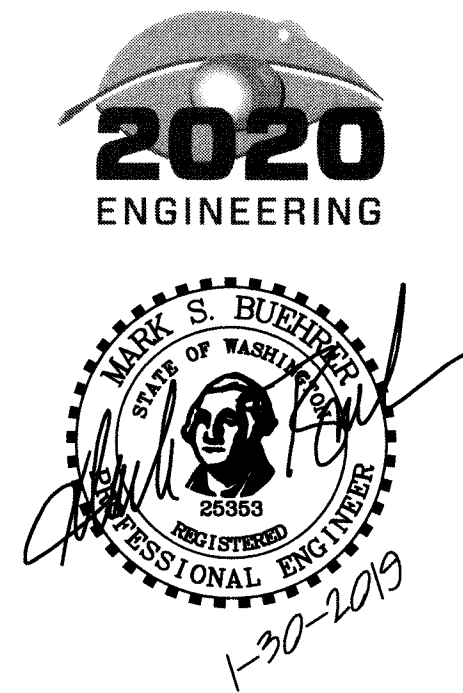
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.



RMC ARCHITECTS

RMC Architects, PLLC • 1223 Railroad Avenue • Bellingham, WA 98225
P: 360.676.7733 • F: 360.738.0448 • www.rmcarhitects.com

00661.009 2/1/19 KB



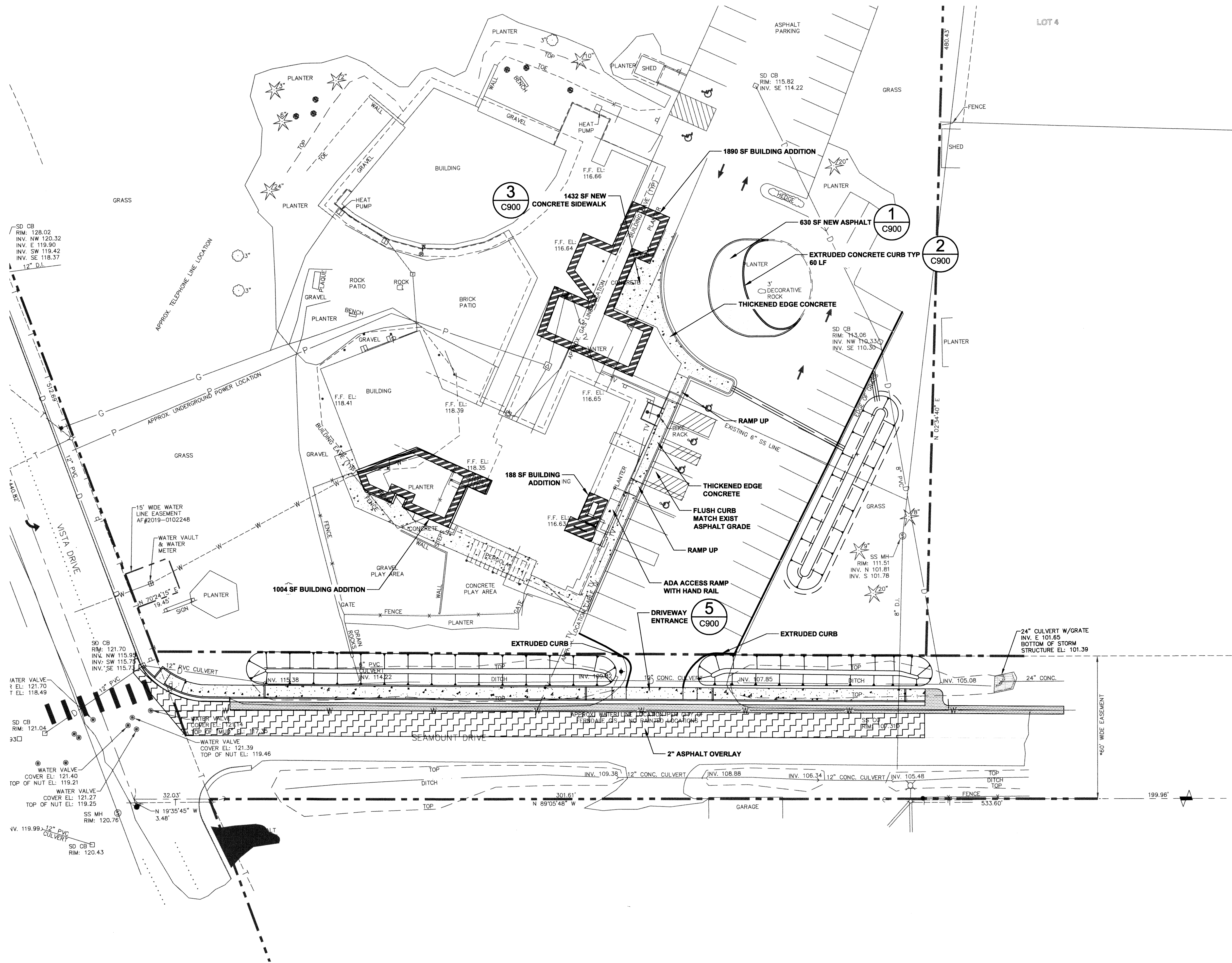
RECORD DRAWING

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

Job No:	1404	Date:	30 JAN 2019
File No:			
Drawn By:	M. CUPP		
Checked By:	M. BUEHRER		
Issued For:	PROJECT RECORD		

T.E.S.C. DETAILS

C410



LEGEND

- NEW CEMENT CONCRETE PAVEMENT
- NEW ASPHALT PAVEMENT
- NEW BUILDING EXTENTS
- ASPHALT OVERLAY

APPROVED
JAN 30 2019
BY *Kevin Renz* FOR KEVIN RENZ
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

ENGINEER'S CERTIFICATION:
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

811
Know what's below.
Call before you dig.

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

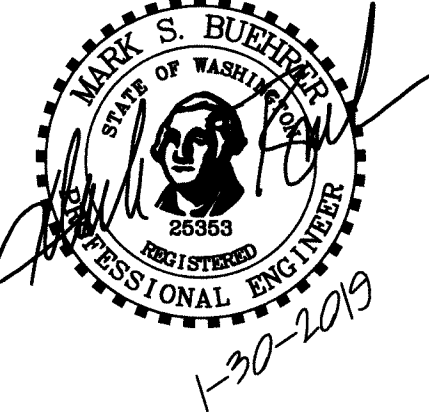
Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

SITE PLAN

C500

**RECORD
DRAWING**

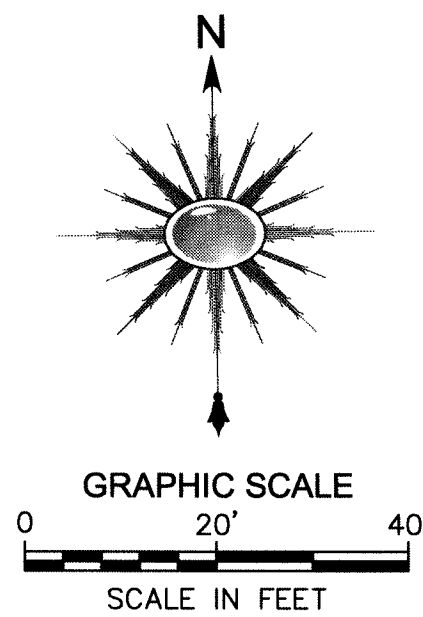
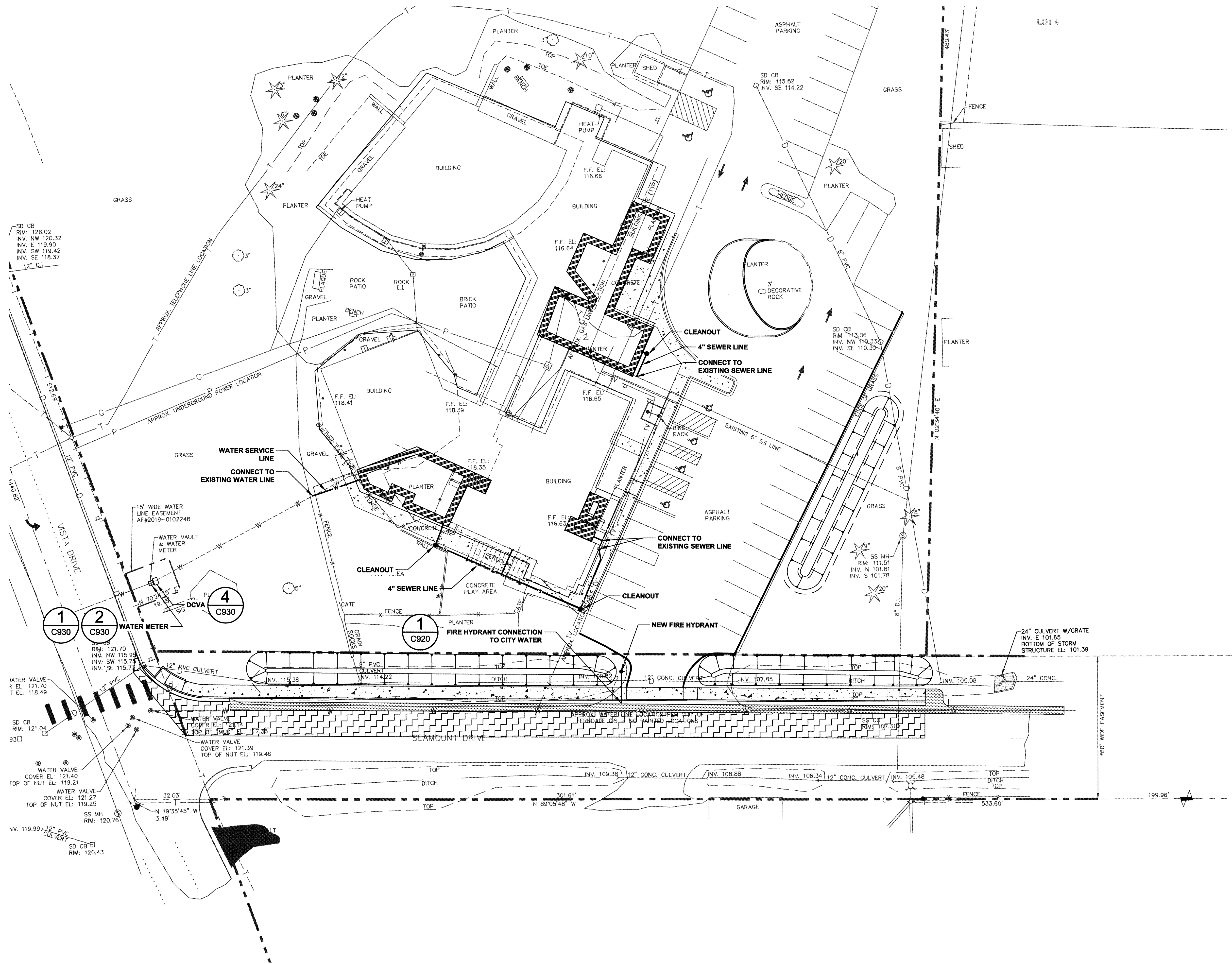
**2020
ENGINEERING**



**RMC
ARCHITECTS**

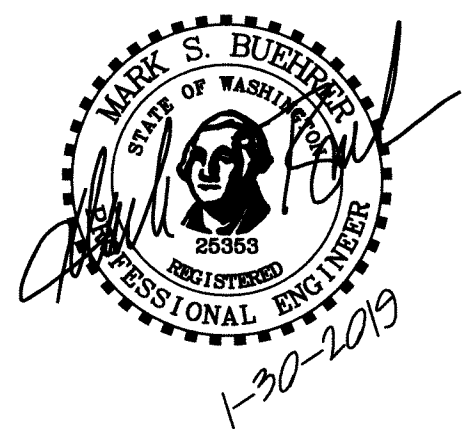
RMC Architects, PLLC - 4223 Railroad Avenue - Bellingham, WA 98225
P: 360.676.1733 F: 360.736.0446 - www.rmcarchitects.com

006681.010 21/19 KB



RMC ARCHITECTS

2020
ENGINEERING



RECORD
DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

APPROVED

JAN 30 2019
FOR KEVIN ZENZ
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.



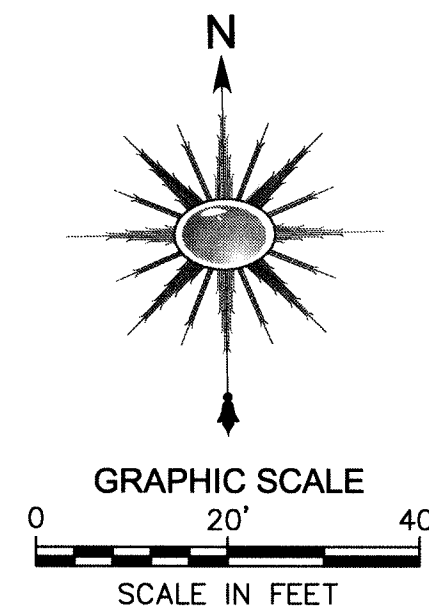
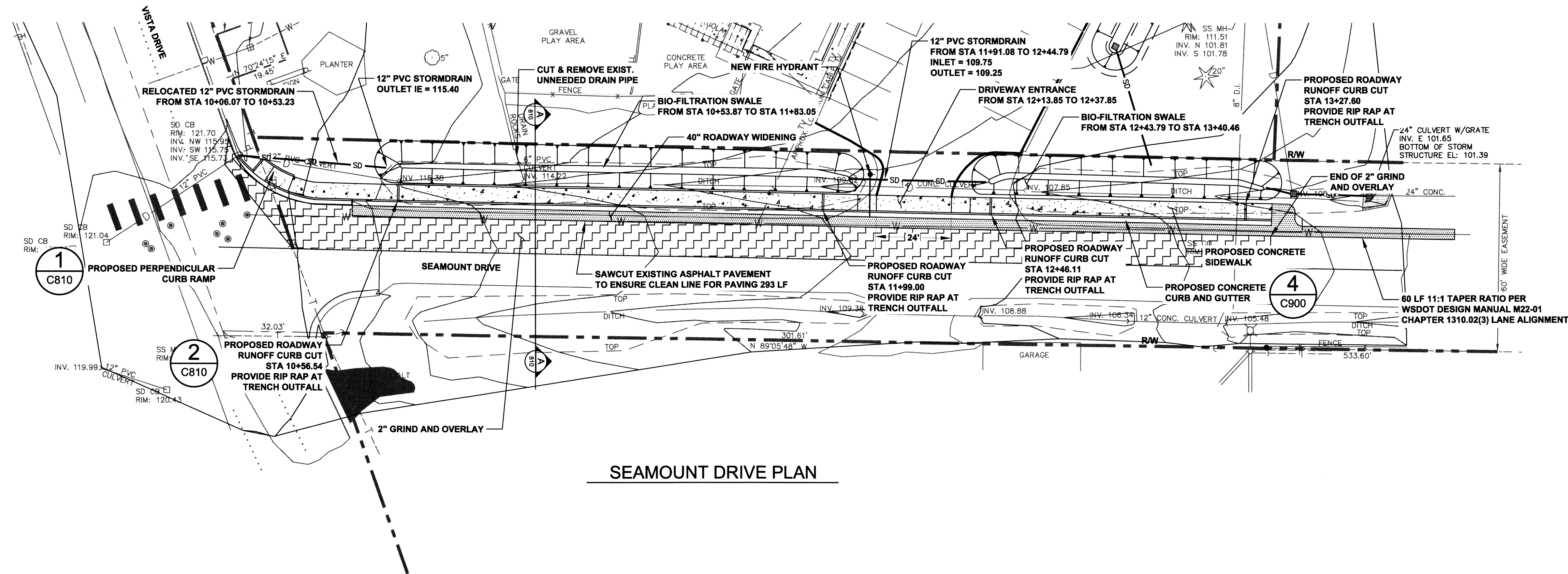
Know what's below.
Call before you dig.

UTILITY PLAN
(SEWER AND
WATER)

C700

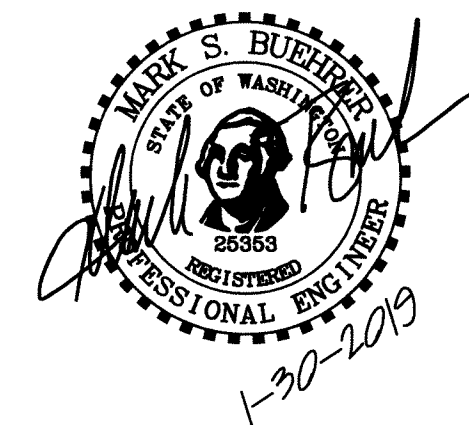
RMC Architects, PLLC 4223 Railroad Avenue - Bellingham, WA 98225
P:360.676.1733 F:360.736.0446 www.rmcarchitects.com

006681.01/2.21/19 KB



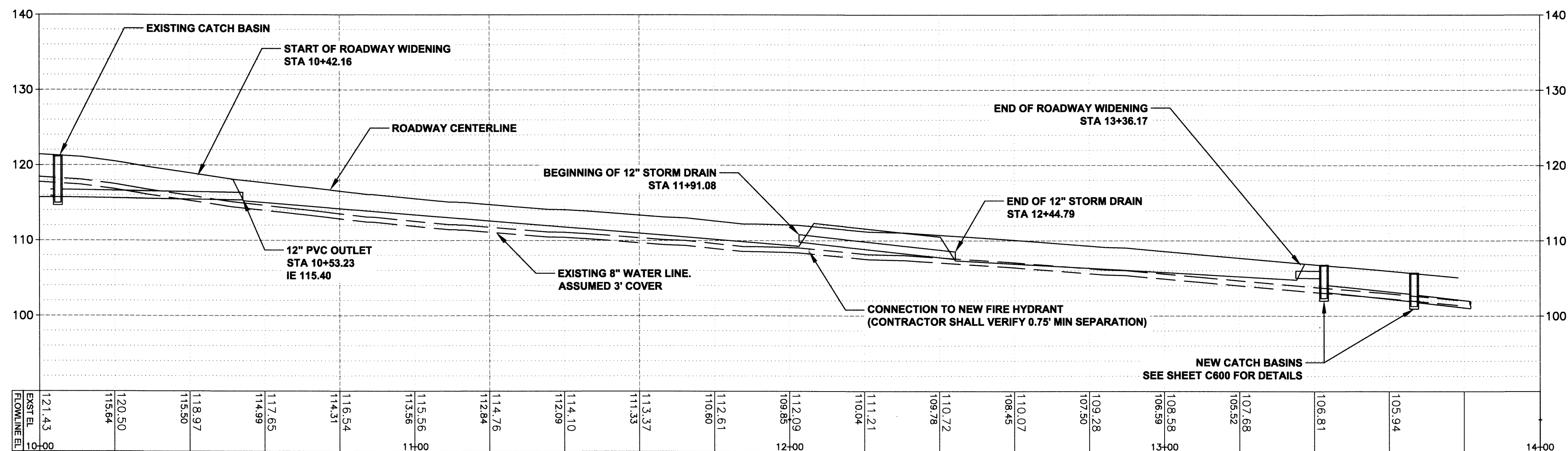
RMC ARCHITECTS

2020
ENGINEERING



RECORD
DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248



SEAMOUNT DRIVE PROFILE
SCALE: 1"=20' HORIZ., 1"=10' VERT.

APPROVED

JAN 30 2019
Kevin Renz
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

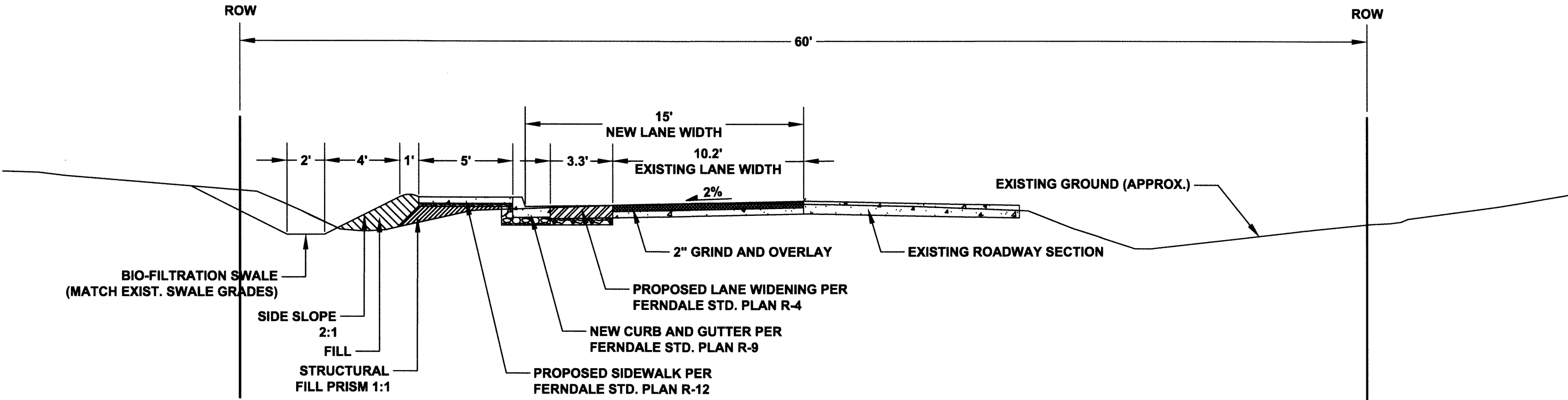
ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

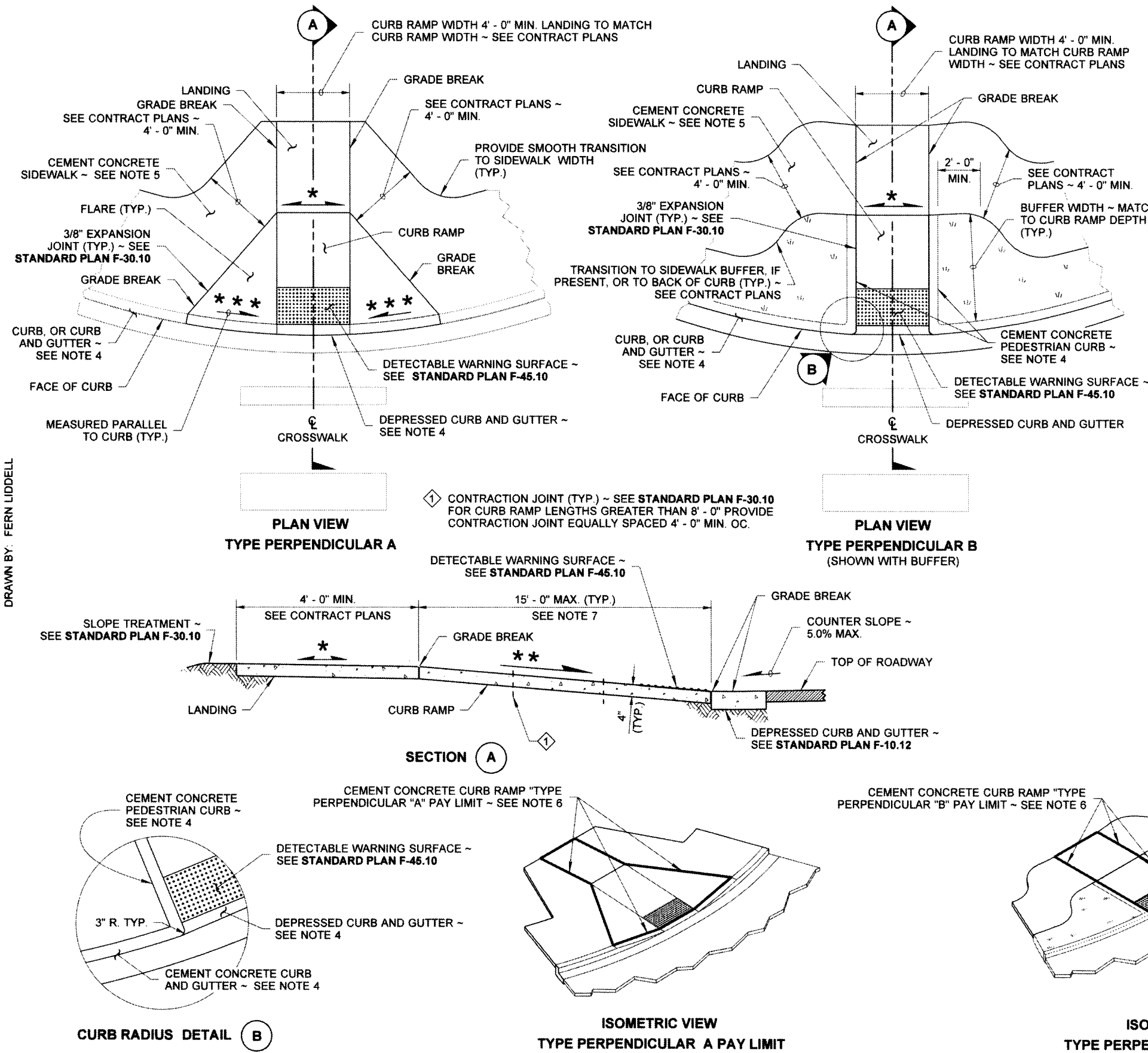


ROADWAY PLAN &
PROFILE

C800



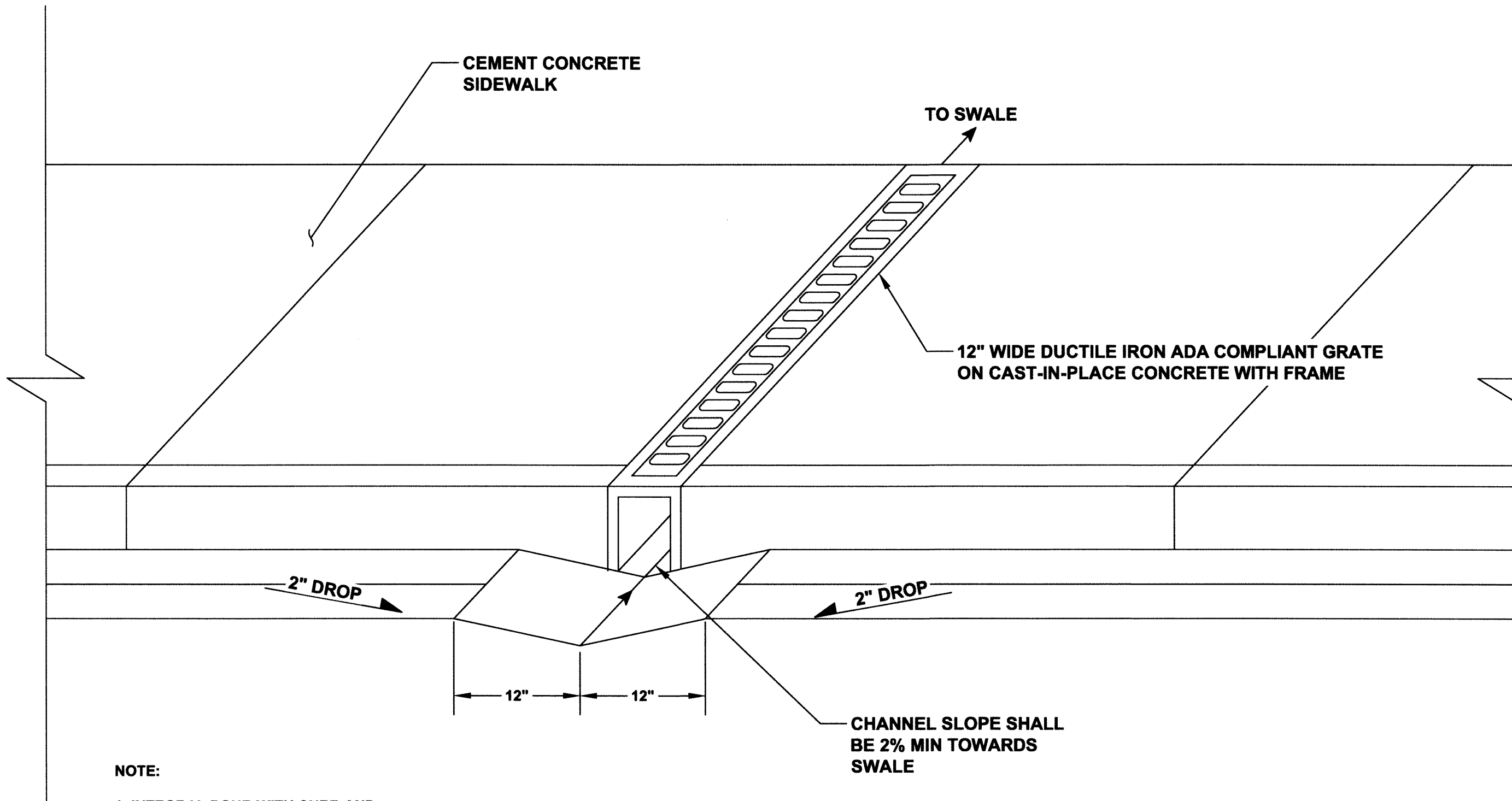
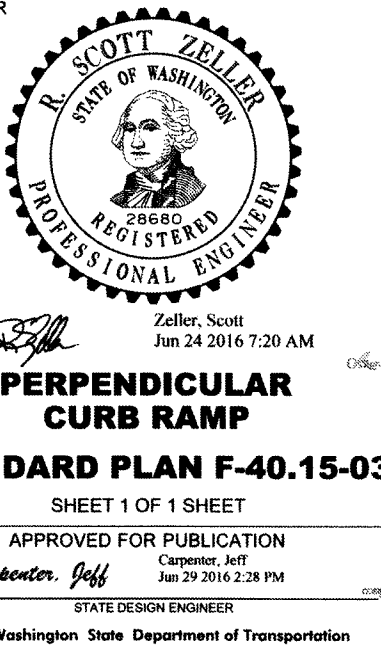
A:A ROW SECTION VIEW
C810 1:5 SCALE



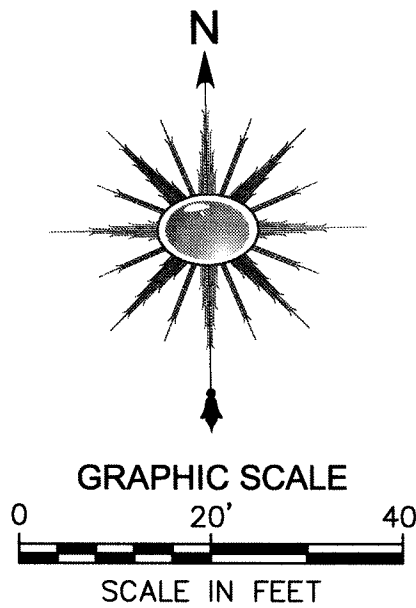
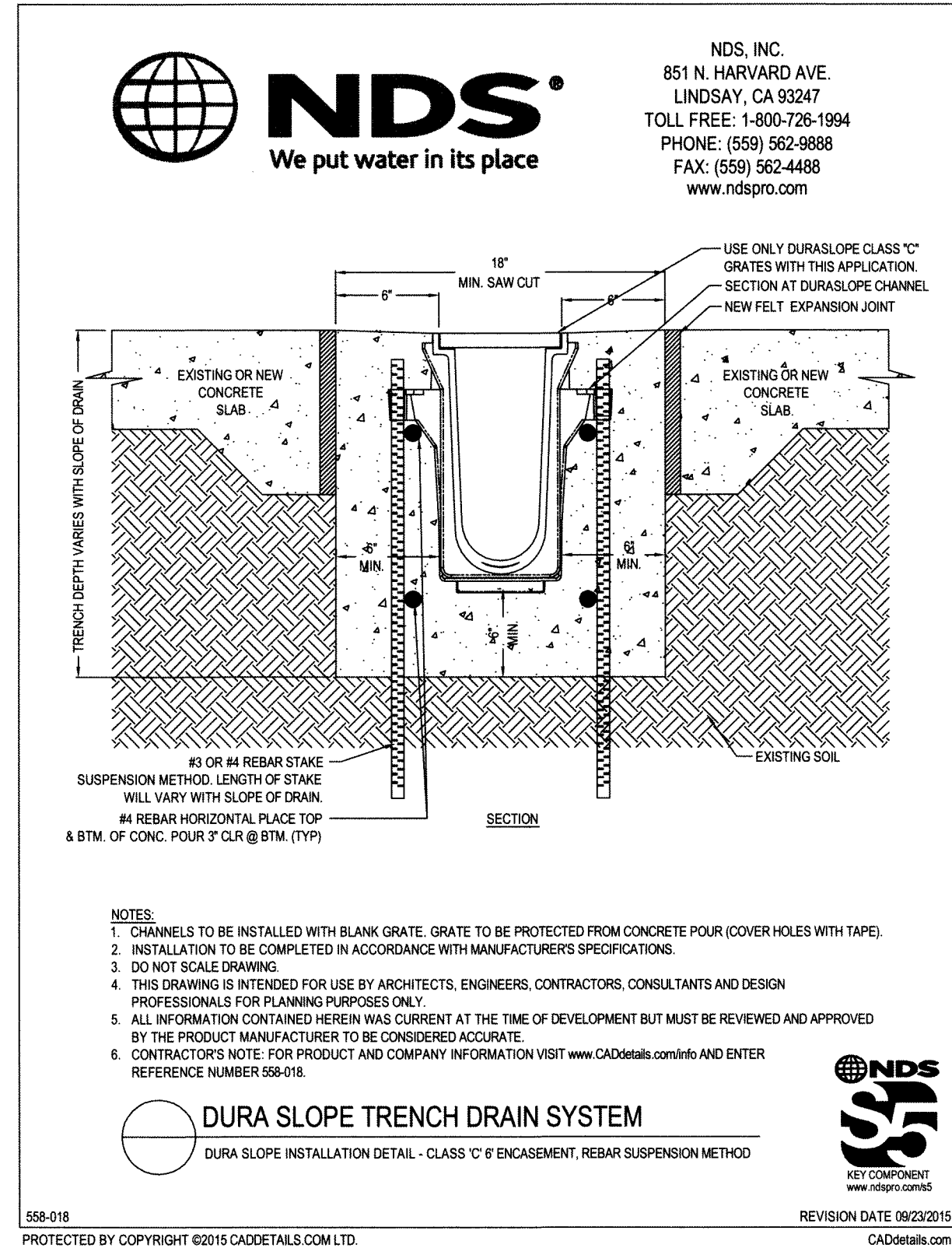
1 PERPENDICULAR CURB RAMP
C810 NTS

- NOTES**
- At marked crosswalks, the connection between the curb ramp and the roadway must be contained within the width of the crosswalk markings.
 - Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
 - Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in front of the Curb Ramp where it connects to the roadway.
 - See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
 - See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
 - The Bid Item "Cement Concrete Curb Ramp Type ..." does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
 - The Curb Ramp length is not required to exceed 15 feet (unless shown otherwise in the Contract Plans). When applying the 15-foot max. length, the running slope of the Curb Ramp is allowed to exceed 8.3%. Use a single constant slope from bottom of ramp to top of ramp to match into the landing over a horizontal distance of 15 feet. Do not include the abutting landing in the 15-foot max. measurement.
 - Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14**.
 - Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will not be material to retain.

- LEGEND**
- SLOPE IN EITHER DIRECTION
 - 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)
 - 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX.)
 - 9.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (10% MAX.)

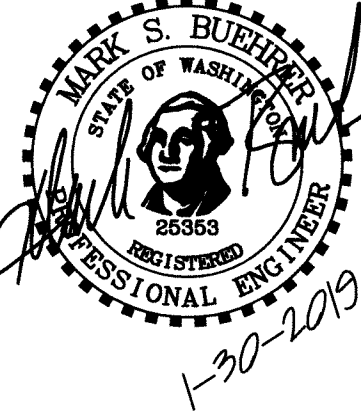


2 CURB CUT WITH CHANNEL DRAIN
C810 NTS



RMC ARCHITECTS

2020 ENGINEERING



RECORD DRAWING

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

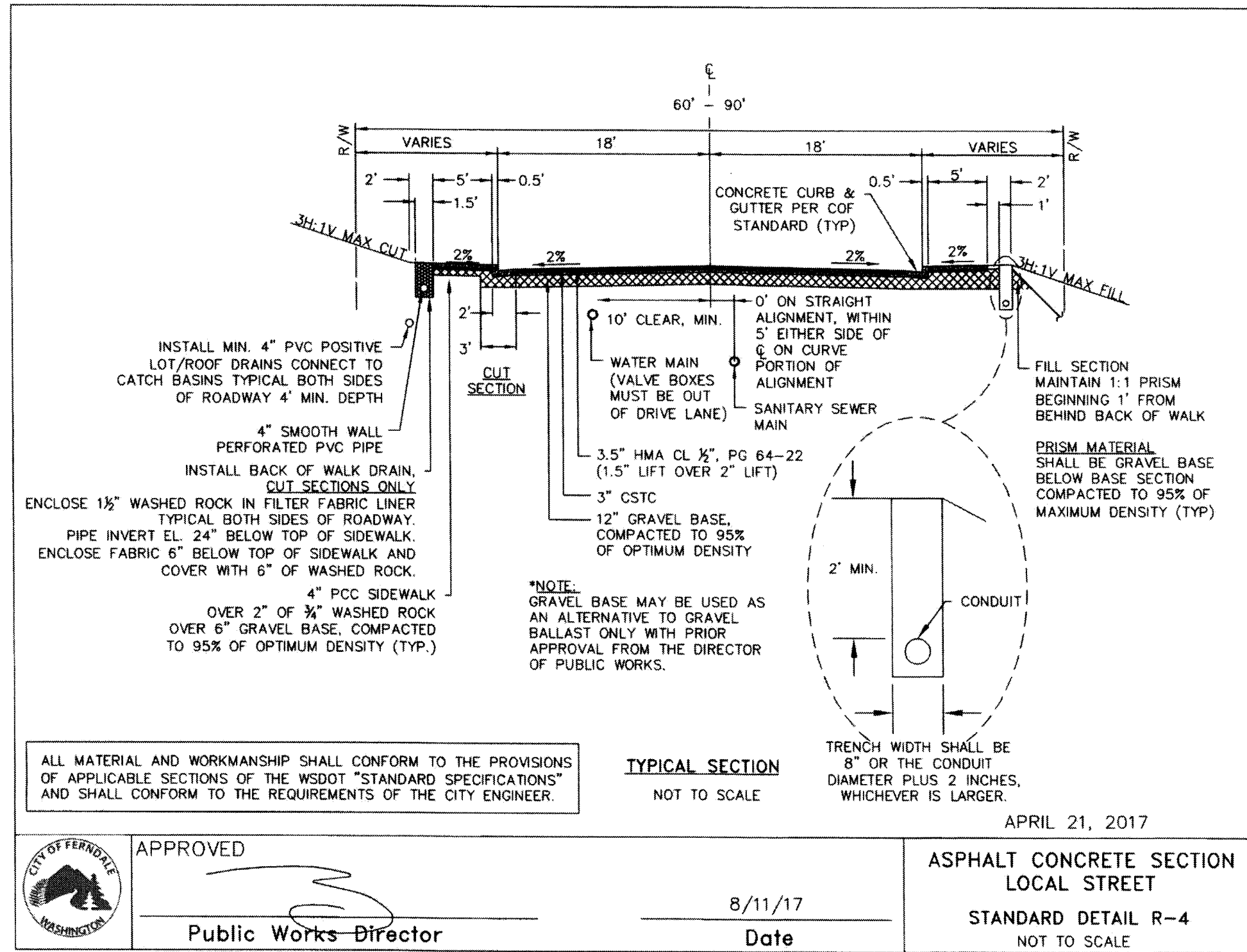
Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

ROADWAY CROSS SECTION & DETAILS

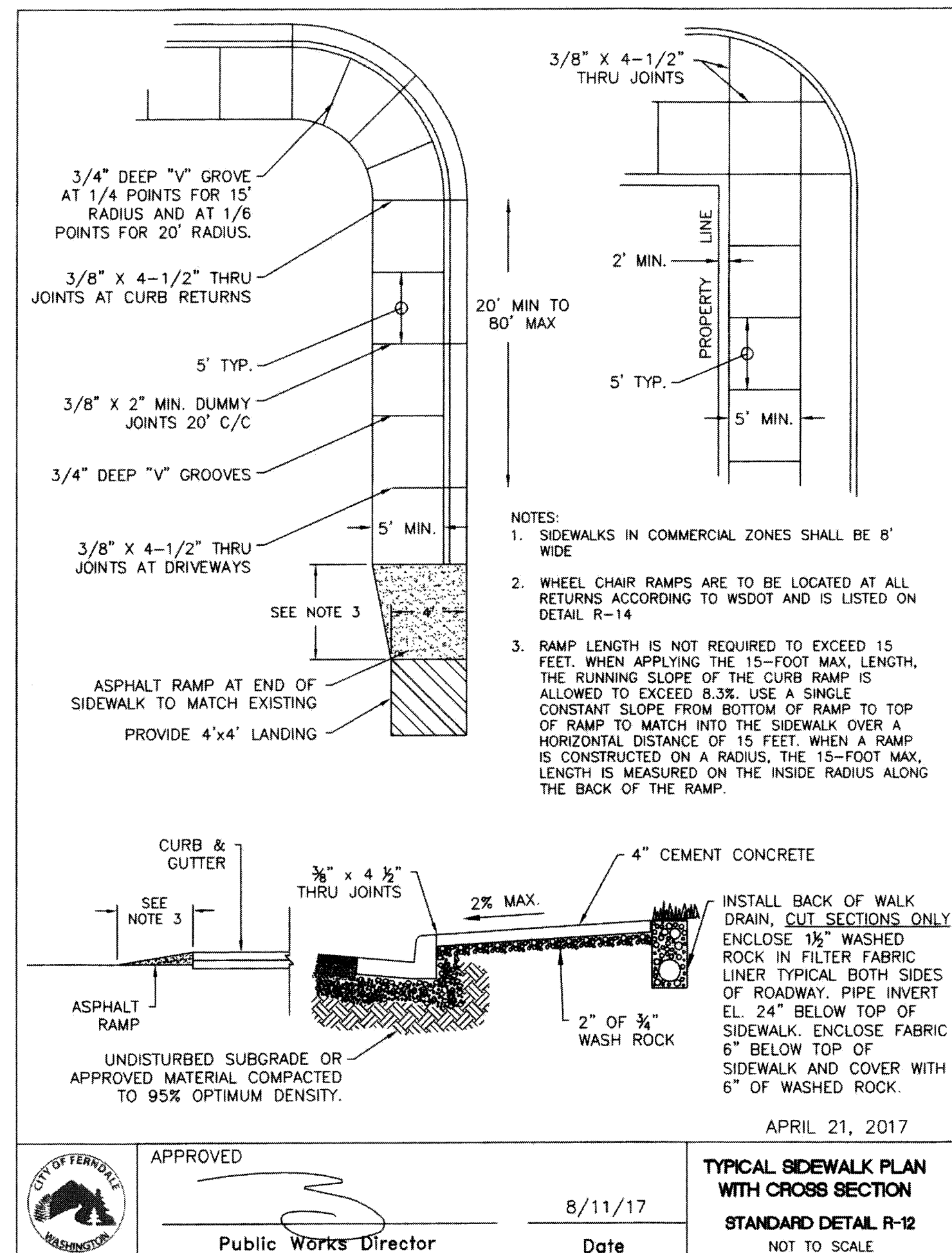
C810

ENGINEER'S CERTIFICATION:
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

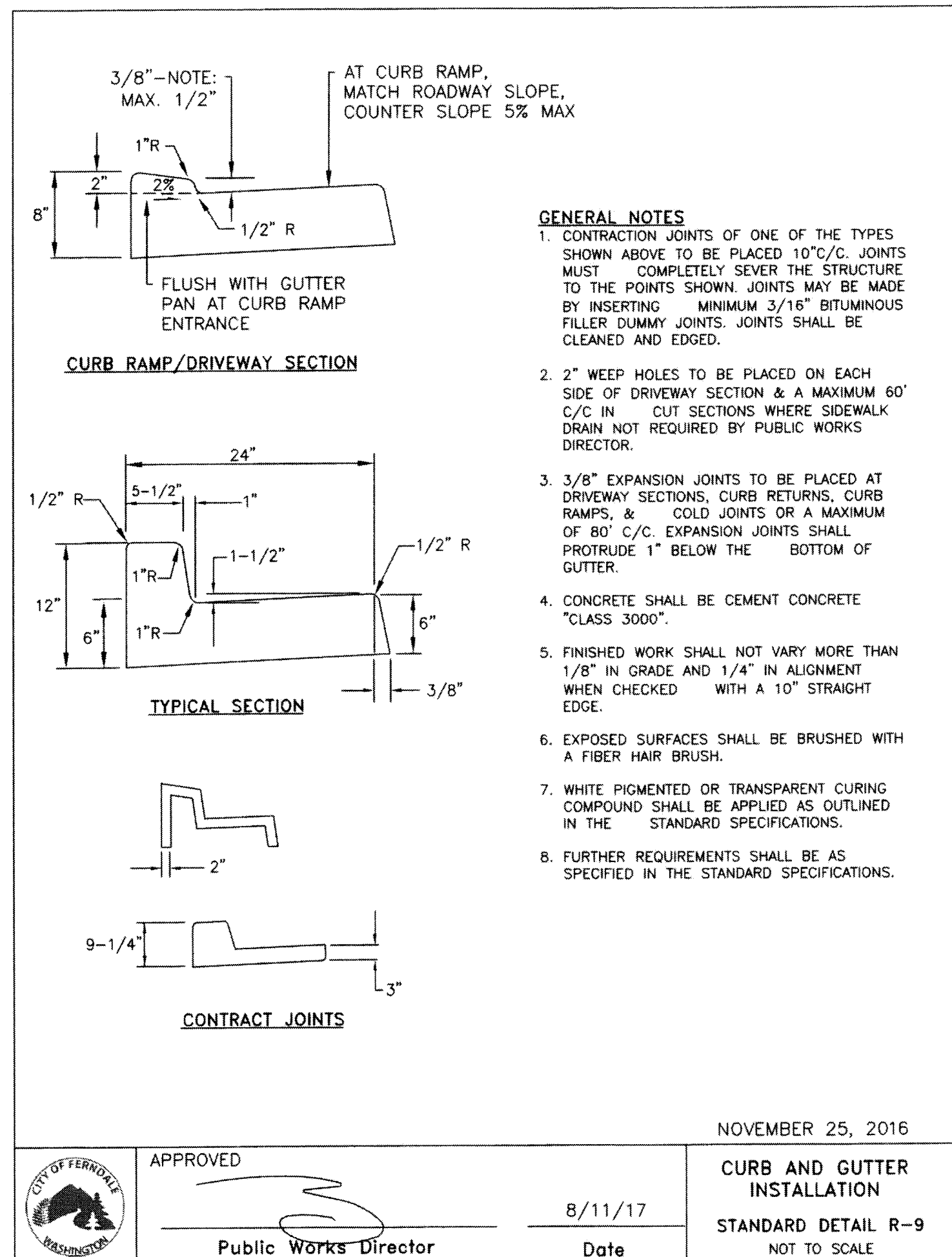




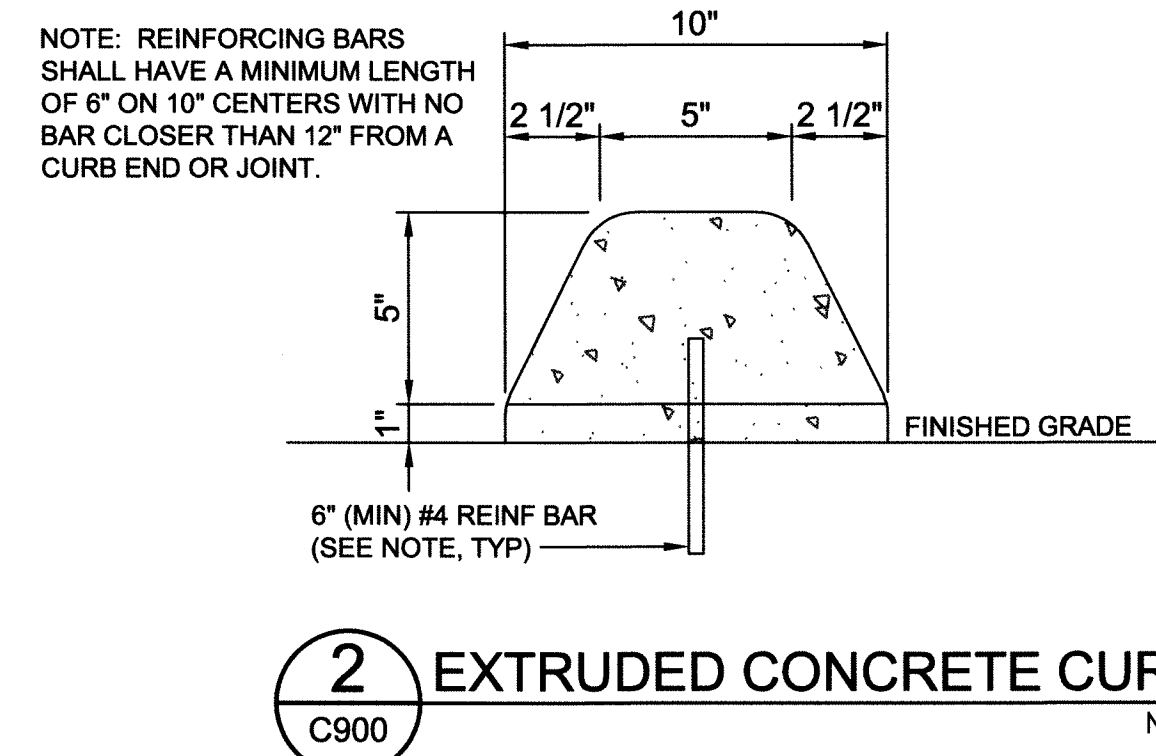
1 ASPHALT CONCRETE SECTION DETAIL
C900 NTS



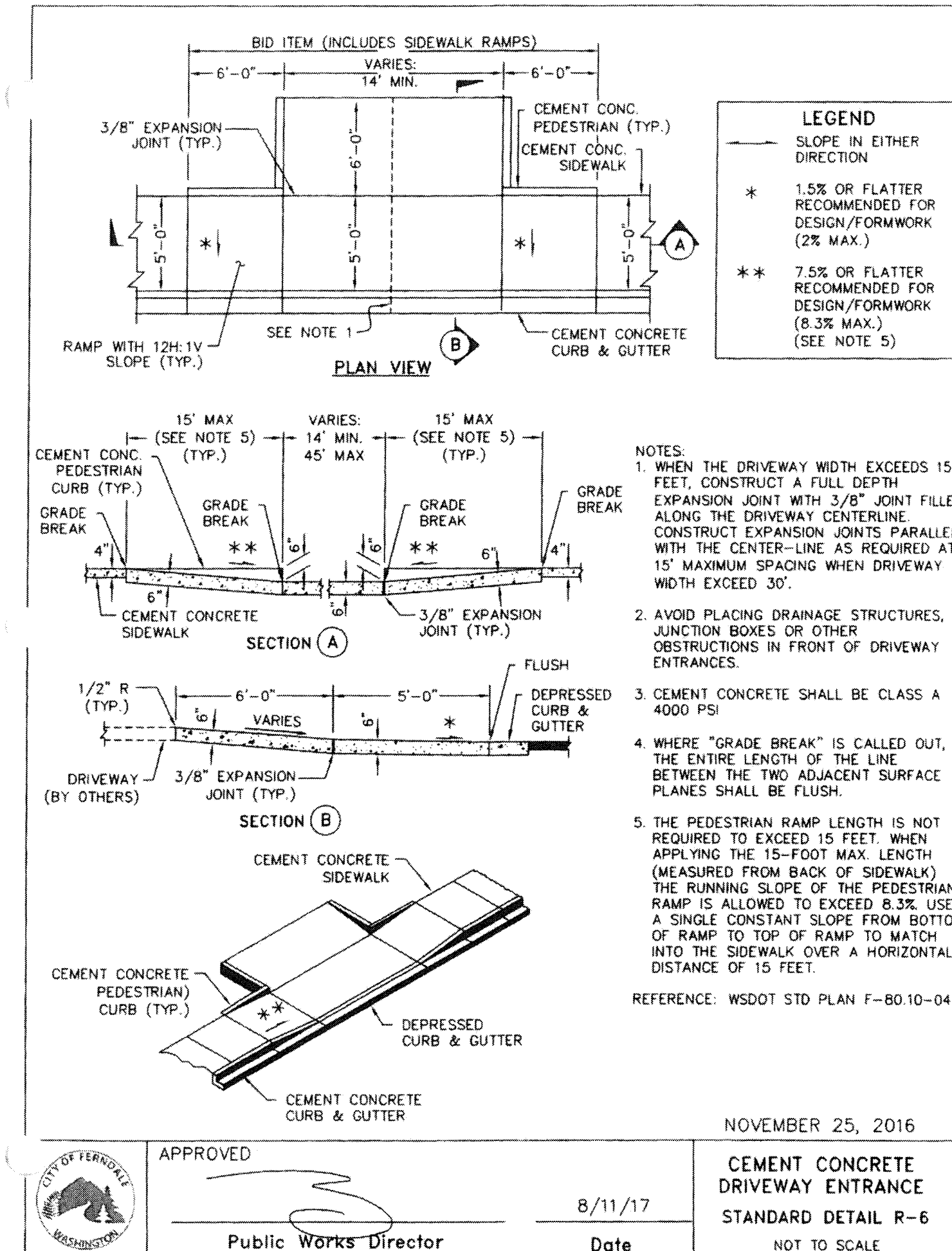
3 CONCRETE SIDEWALK DETAIL
C900 NTS



4 CONCRETE CURB AND GUTTER DETAIL
C900 NTS



2 EXTRUDED CONCRETE CURB
C900 NTS



5 DRIVEWAY SECTION CURB CUT DETAIL
C900 NTS

ENGINEER'S CERTIFICATION:
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

APPROVED
[Signature]
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

811
Know what's below. NTS
Call before you dig.

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

CIVIL DETAILS

C900

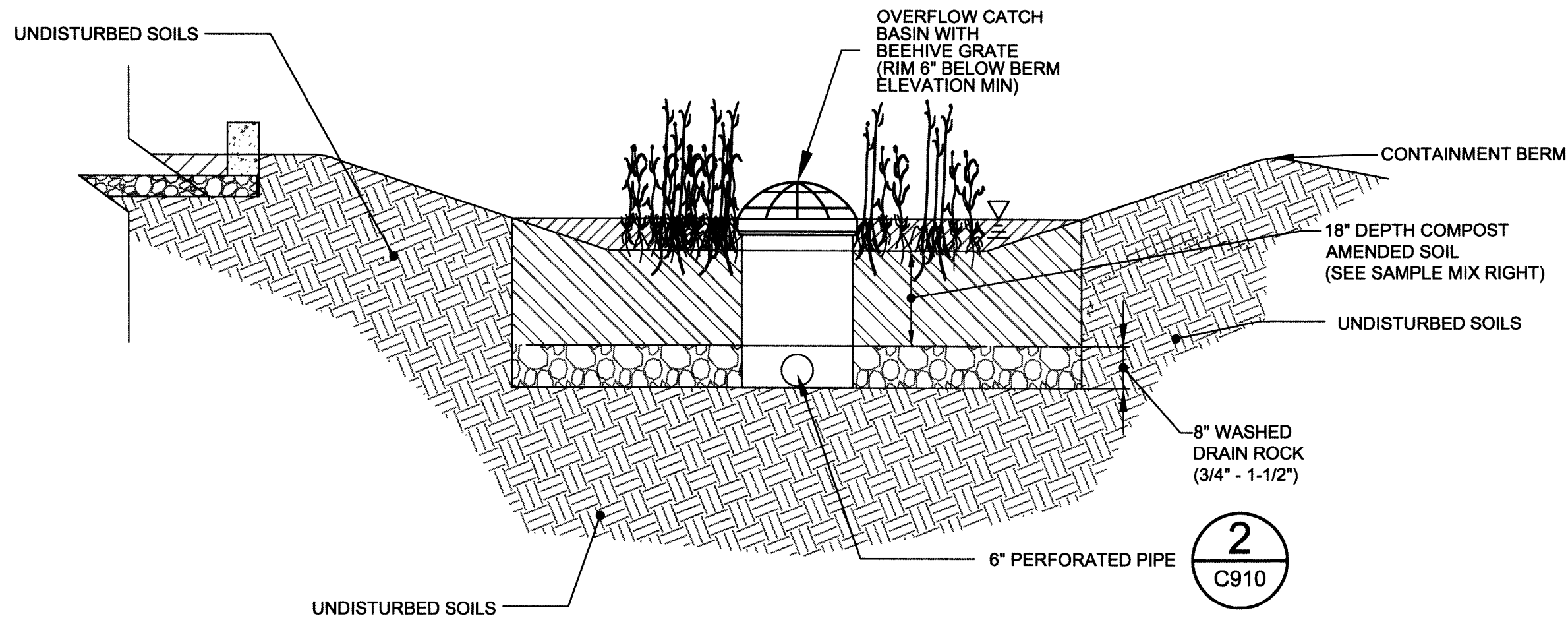
**RECORD
DRAWING**

**2020
ENGINEERING**
[Signature]
MARK S. BUEHRER
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
1-30-2019

RMC ARCHITECTS

RMC Architects, PLLC 1223 Railroad Avenue - Bellingham, WA 98225
P:360.676.7733 - F:360.738.0448 - www.rmcarchitects.com

00661.015 2/1/19 KB



BIORETENTION CELL INSTALLATION NOTES

EXCAVATION:
SOIL COMPACTION CAN LEAD TO FACILITY FAILURE; ACCORDINGLY, MINIMIZING COMPACTION OF THE BASE AND SIDEWALLS OF THE BIORETENTION AREA IS CRITICAL. EXCAVATION SHOULD NEVER BE ALLOWED DURING WET OR SATURATED CONDITIONS (COMPACTION CAN REACH DEPTHS OF 2-3 FEET DURING WET CONDITIONS AND MITIGATION IS LIKELY NOT BE POSSIBLE). EXCAVATION SHOULD BE PERFORMED BY MACHINERY OPERATING ADJACENT TO THE BIORETENTION FACILITY AND NO HEAVY EQUIPMENT WITH NARROW TRACKS, NARROW TIRES, OR LARGE LUGGED, HIGH PRESSURE TIRES SHOULD BE ALLOWED ON THE BOTTOM OF THE BIORETENTION FACILITY. IF MACHINERY MUST OPERATE IN THE BIORETENTION CELL FOR EXCAVATION, USE LIGHT WEIGHT, LOW GROUND-CONTACT PRESSURE EQUIPMENT AND RIP THE BASE AT

COMPLETION TO REFRACTURE SOIL TO A MINIMUM OF 12 INCHES. IF MACHINERY OPERATES IN THE FACILITY, SUBGRADE INFILTRATION RATES MUST BE FIELD TESTED AND COMPARED TO DESIGN RATES. FAILURE TO MEET OR EXCEED THE DESIGN INFILTRATION RATE WILL REQUIRE REVISED ENGINEERING DESIGNS TO VERIFY ACHIEVEMENT OF TREATMENT AND FLOW CONTROL BENEFITS THAT WERE ESTIMATED IN THE STORMWATER SITE PLAN.

PRIOR TO PLACEMENT OF THE BSM, THE FINISHED SUBGRADE SHALL: BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES.

HAVE ANY SEDIMENT DEPOSITED FROM CONSTRUCTION RUNOFF REMOVED. TO REMOVE ALL INTRODUCED SEDIMENT, SUBGRADE SOIL SHOULD BE REMOVED TO A DEPTH OF 3-6 INCHES AND REPLACED WITH BSM.

BE INSPECTED BY THE RESPONSIBLE ENGINEER TO VERIFY REQUIRED

SUBGRADE CONDITION.

SIDEWALLS OF THE FACILITY, BENEATH THE SURFACE OF THE BSM, CAN BE VERTICAL IF SOIL STABILITY IS ADEQUATE. EXPOSED SIDEWALLS OF THE COMPLETED BIORETENTION AREA WITH BSM IN PLACE SHOULD BE NO STEEPER THAN 3H:1V. THE BOTTOM OF THE FACILITY SHOULD BE FLAT.

SOIL PLACEMENT:

ON-SITE SOIL MIXING OR PLACEMENT SHALL NOT BE PERFORMED IF BIORETENTION SOIL MIX OR SUBGRADE SOIL IS SATURATED. THE BIORETENTION SOIL MIXTURE SHOULD BE PLACED AND GRADED BY MACHINERY OPERATING ADJACENT TO THE BIORETENTION FACILITY. IF MACHINERY MUST OPERATE IN THE BIORETENTION CELL FOR SOIL PLACEMENT, USE LIGHT WEIGHT EQUIPMENT WITH LOW GROUND-CONTACT PRESSURE. IF MACHINERY OPERATES IN THE FACILITY, SUBGRADE INFILTRATION RATES MUST BE FIELD TESTED AND

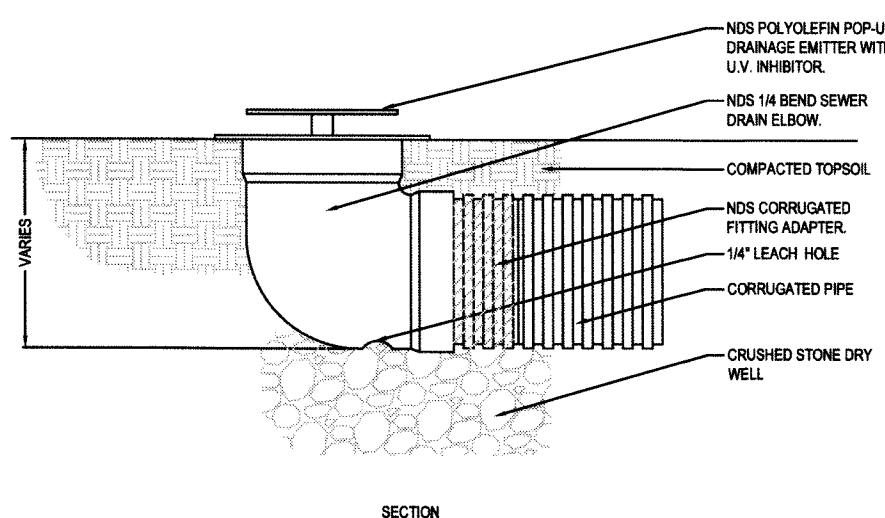
COMPARED TO DESIGN RATES. FAILURE TO MEET OR EXCEED THE DESIGN INFILTRATION RATE WILL REQUIRE REVISED ENGINEERING DESIGNS TO VERIFY ACHIEVEMENT OF TREATMENT AND FLOW CONTROL BENEFITS THAT WERE ESTIMATED IN THE STORMWATER SITE PLAN.

THE SOIL MIXTURE SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 12 INCHES PER LIFT FOR THE ENTIRE AREA OF THE BIORETENTION FACILITY. COMPACT THE BIORETENTION SOIL MIX TO A RELATIVE COMPACTION OF 85 PERCENT OF MODIFIED MAXIMUM DRY DENSITY (ASTM D 1557). COMPACTION CAN BE ACHIEVED BY BOOT PACKING (SIMPLY WALKING OVER ALL AREAS OF EACH LIFT), AND THEN APPLY 0.2 INCHES (0.5 CM) OF WATER PER 1 INCH (2.5 CM) OF BIORETENTION SOIL MIX DEPTH. WATER FOR SETTLING SHOULD BE APPLIED BY SPRAYING OR SPRINKLING.

1 BIORETENTION CELL DETAIL C910 NTS



NDS, INC.
851 N. HARVARD AVE.
LINDSAY, CA 93247
TOLL FREE: 1-800-726-1994
PHONE: (559) 562-9888
FAX: (559) 562-4488
www.ndspro.com



- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.ndsdrain.com/info AND ENTER REFERENCE NUMBER 559-265.



559-265



REVISION DATE 06/22/2015

3 POP-UP EMITTER C910 NTS



Example Soil and Compost Specifications for Low Impact Development



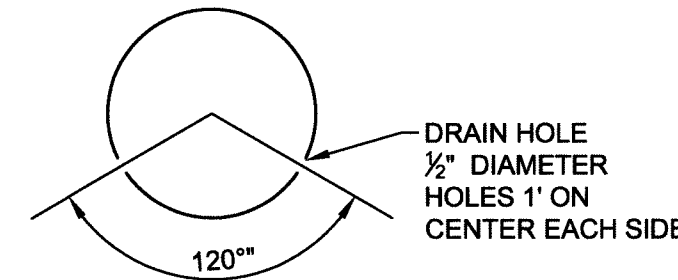
Compost Standards for Bioretention Soil Mix: Western Washington

COMPOST FRACTION + AGGREGATE FRACTION = BIORETENTION SOIL MIX

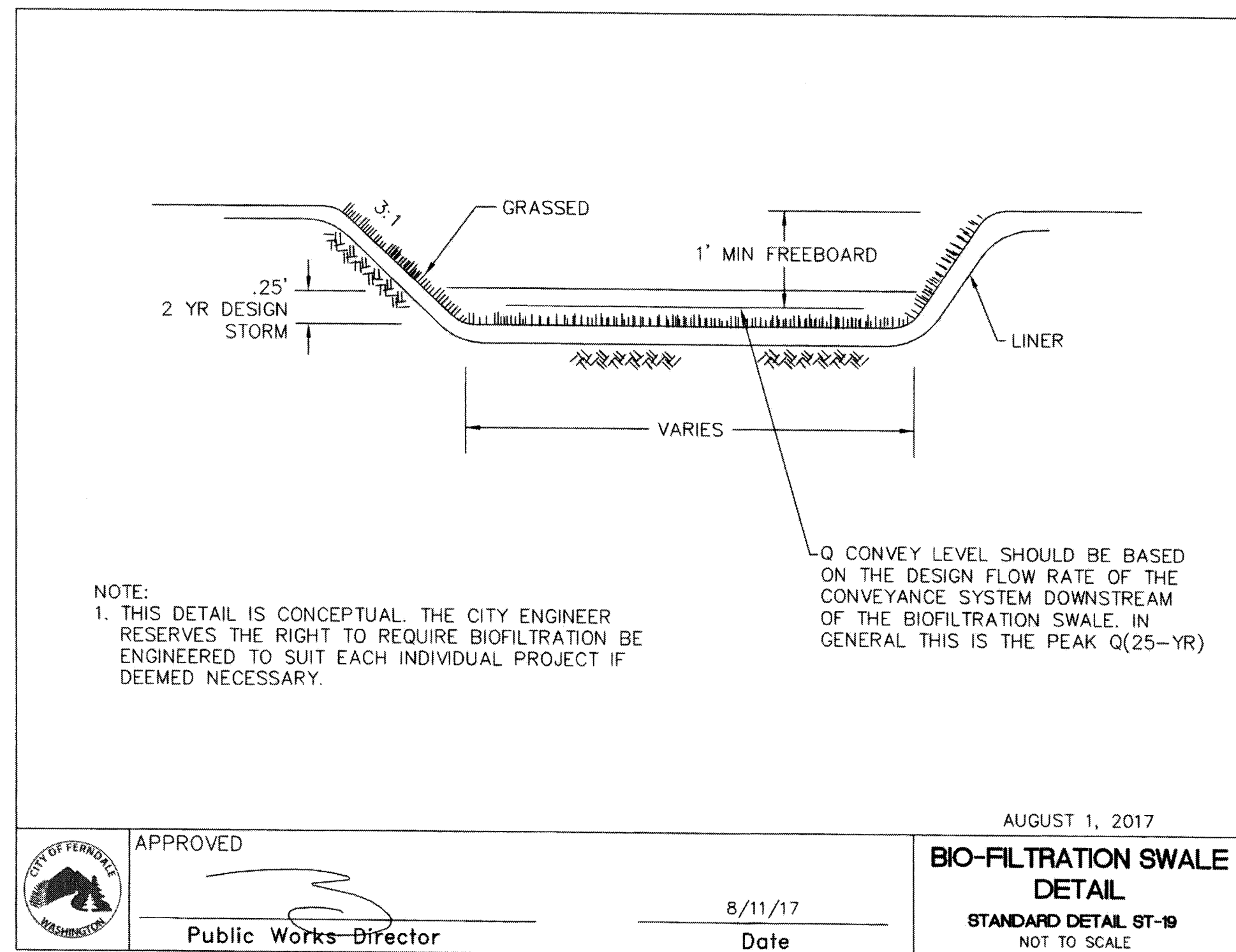
Parameter	Method	Acceptable Range
Feedstock composition		≥ 65% Type I Feedstock ≤ 35% Type III Feedstock Compost vendor must be STA Certified
pH	TMECC 04.11-A	6.0 - 8.5
Carbon : Nitrogen ratio	TOC - TMECC 04.01; TKN - TMECC 04.02D	25 carbon:1 nitrogen and up to 35:1 if using native plantings from Puget Sound lowlands region
Inert material	TMECC 03.08A	≤ 1%, 0% plastic
Organic content	TMECC 05.07A	40% - 65% by dry weight
Sieve gradations	TMECC 02.02-B	100% passing through 1" sieve
Maturity indicator	TMECC 05.05A	Germination > 80% Vigor > 80%
Stability	TMECC 05.08B	≤ 7
Contaminant levels	WAC 173-350, Section 220	Table 220-B Testing Parameters
Moisture level		No visible free water or dust when handling
Soluble salt/ Electrical conductivity	TMECC 04.10-A	< 4 mmhos/cm

Parameter	Method	Acceptable Range
Aggregate gradation	ASTM D 422	Sieve Size
		Percent Passing
		1 inch
		100
		No. 4
		95 - 100
Coefficient of uniformity	ASTM D 422	No. 10
		75 - 90
		No. 40
		25 - 40
		No. 100
		4 to 10
		No. 200
		2 to 5

Parameter	Method	Acceptable Range
Mix ratio (Aggregate : Compost)	N/A	60:40
Permeability rate	ASTM D 2434 - 2012 SWMMW version	Initial rate < 12 inches per hour at 85% compaction. Long term > 1 inch per hour.
Organic matter content	ASTM D 2974 or TMECC 05.07A	4 - 8% (by dry weight)
Cation exchange capacity	EPA 9081	≥ 5 meq/100 g dry soil



2 6" PERFORATED HDPE C910 SCALE: N.T.S.



- NOTE:**
1. THIS DETAIL IS CONCEPTUAL. THE CITY ENGINEER RESERVES THE RIGHT TO REQUIRE BIOFILTRATION BE ENGINEERED TO SUIT EACH INDIVIDUAL PROJECT IF DEEMED NECESSARY.

APPROVED
Public Works Director
8/11/17
Date

AUGUST 1, 2017
BIO-FILTRATION SWALE DETAIL
STANDARD DETAIL ST-19
NOT TO SCALE

4 BIO-FILTRATION SWALE DETAIL C910 (ALONG SEAMOUNT DRIVE) NTS

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

APPROVED

JAN 30 2019
BY *Kevin Renz*
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT



Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

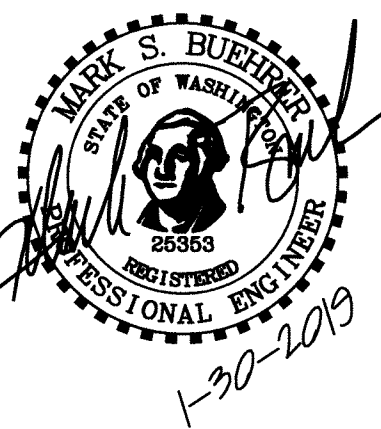
Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

CIVIL DETAILS

C910

RMC ARCHITECTS

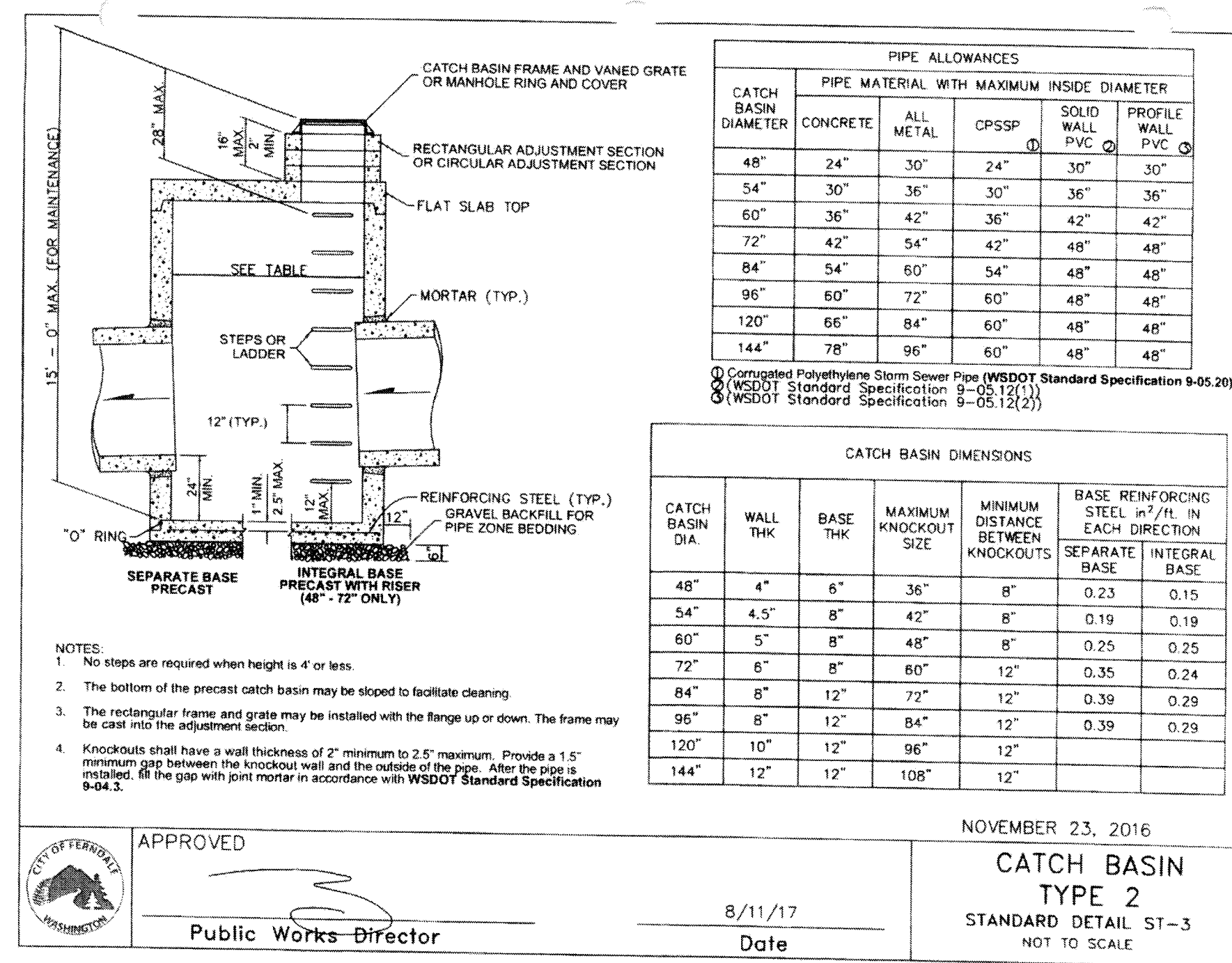
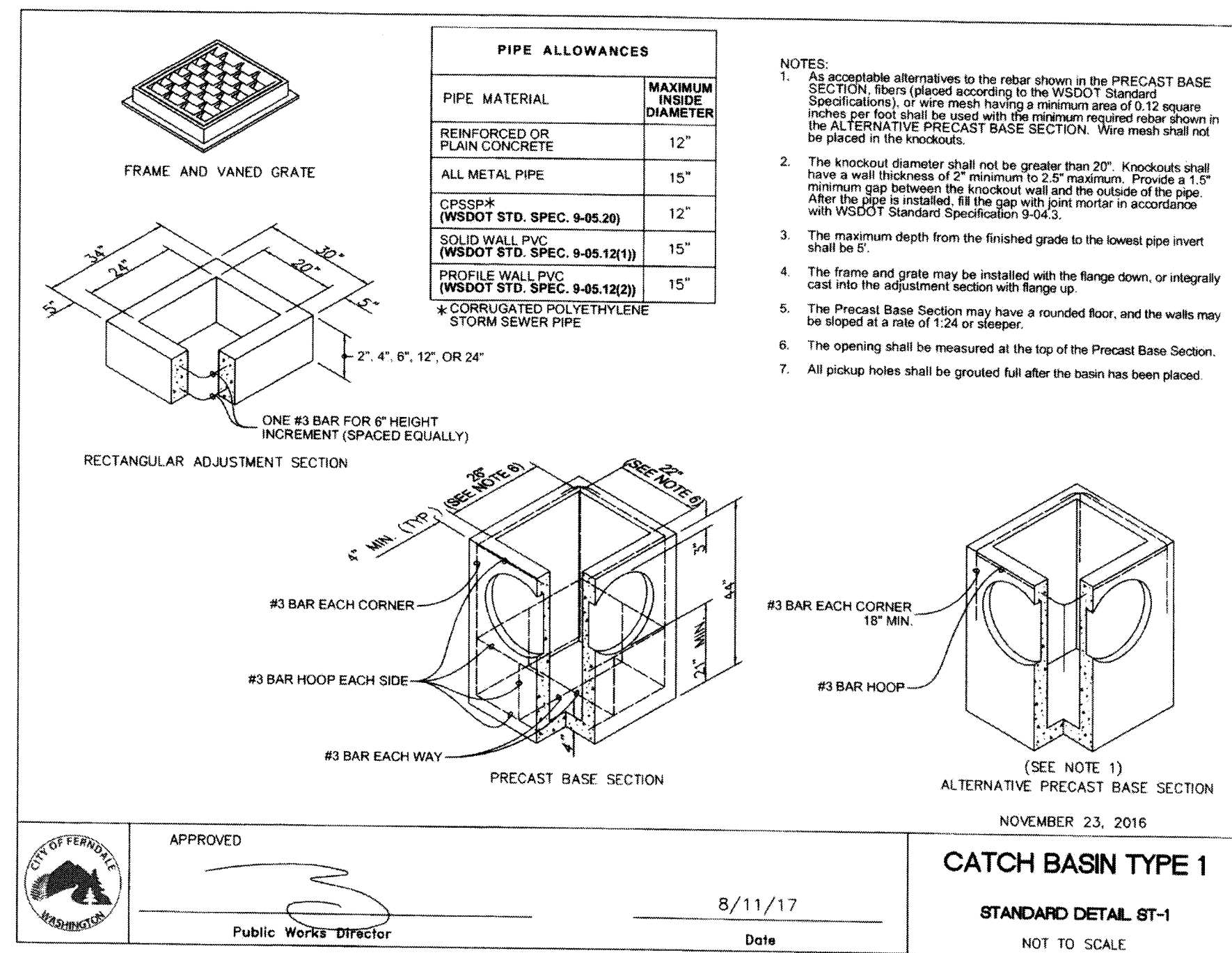
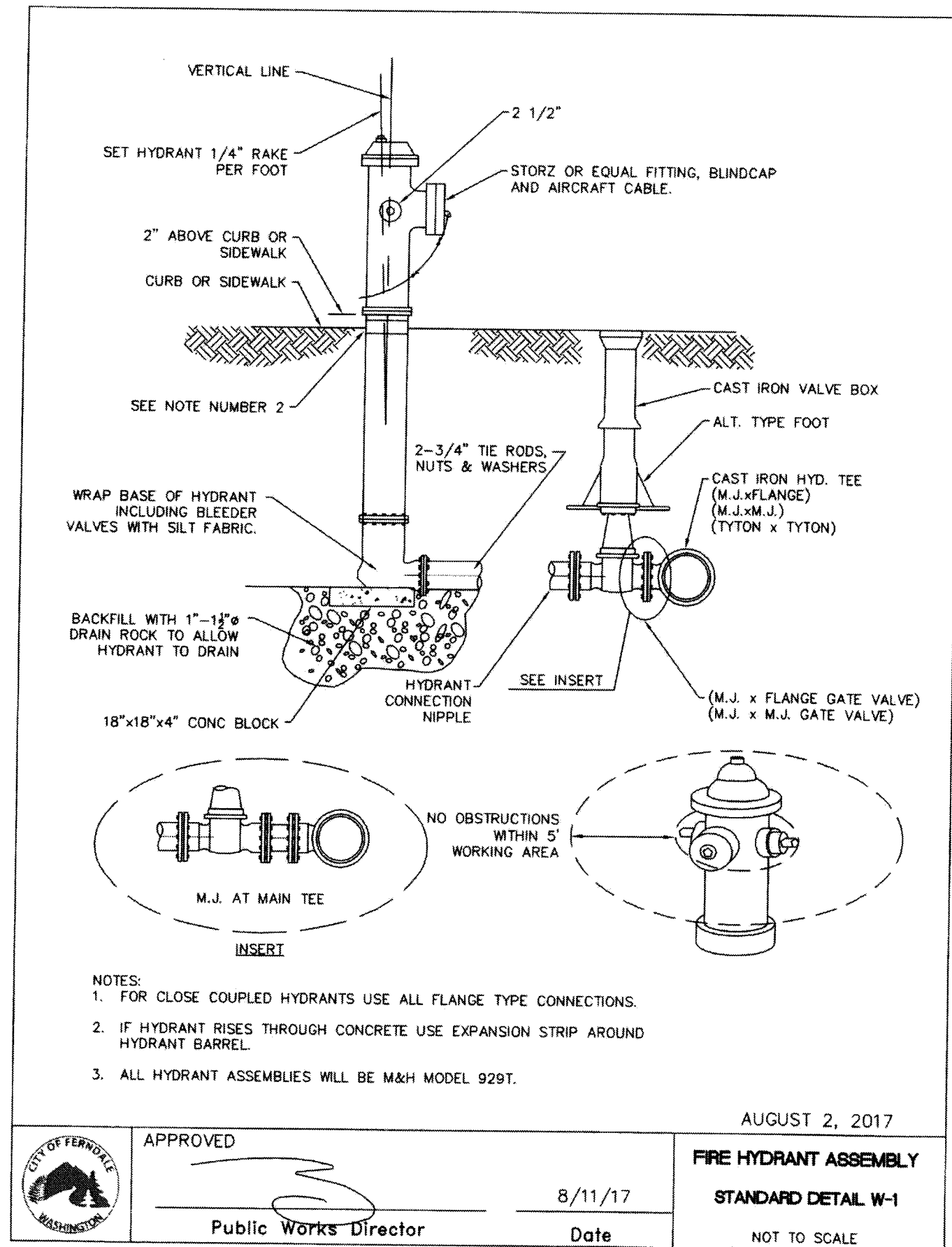
2020
ENGINEERING



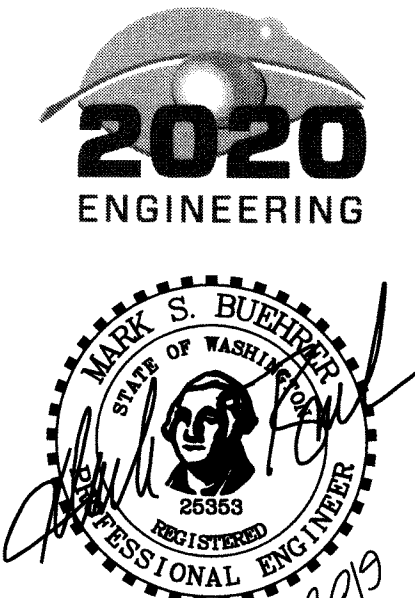
RECORD
DRAWING

RMC Architects, PLLC • 1223 Railroad Avenue • Bellingham, WA 98225
P: 360.676.1733 F: 360.738.0446 • www.rmcarchitects.com

00661.016 2/1/19 KB



RMC ARCHITECTS



RECORD DRAWING

Christ Lutheran Church
Expansion & Remodel
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUYP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

CIVIL DETAILS

C920

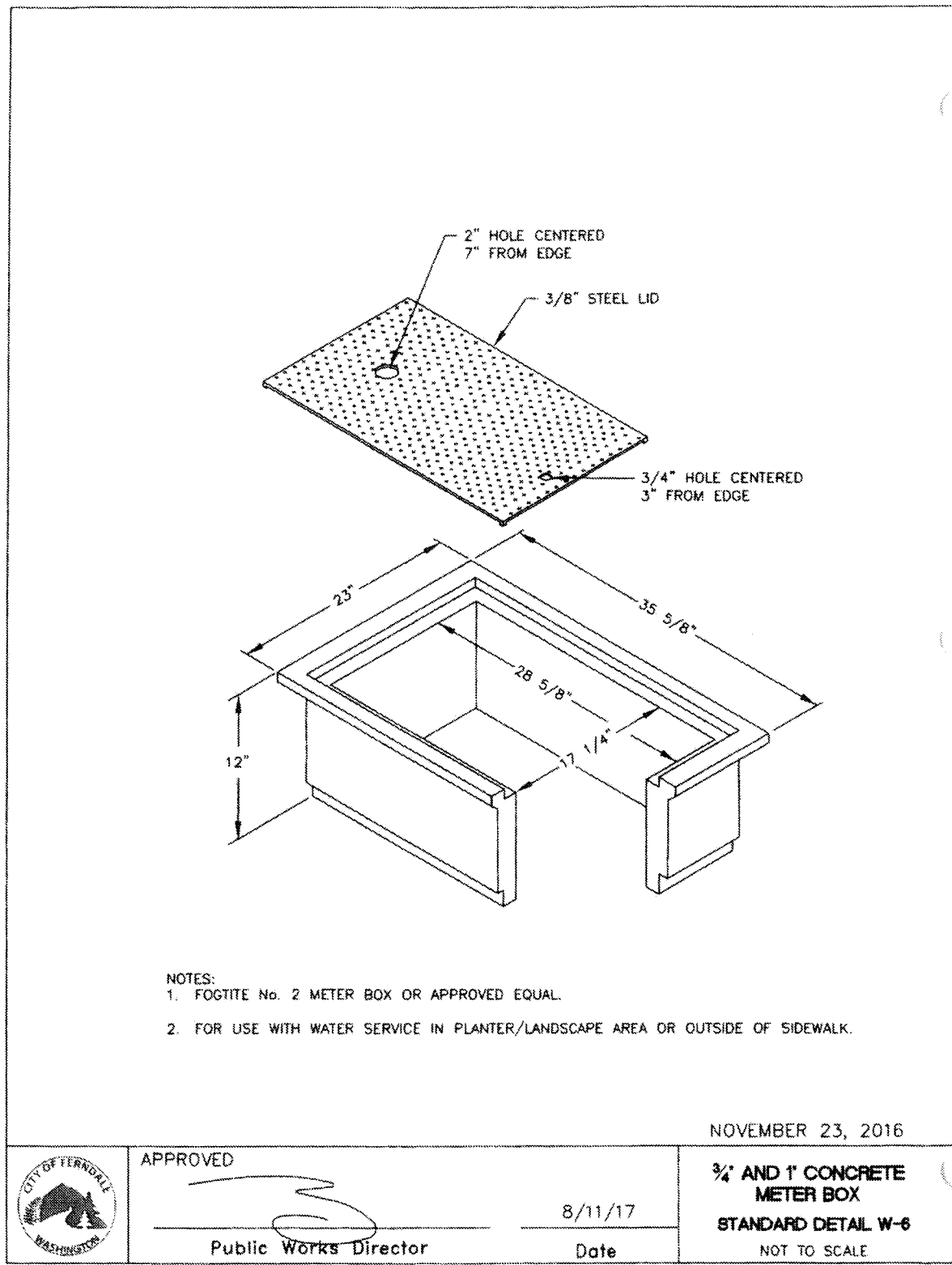
RMC Architects, PLLC • 1223 Railroad Avenue • Bellingham, WA 98225
P: 360.676.7733 • F: 360.736.0446 • www.rmcarchitects.com

00661.017 2/1/19 KB

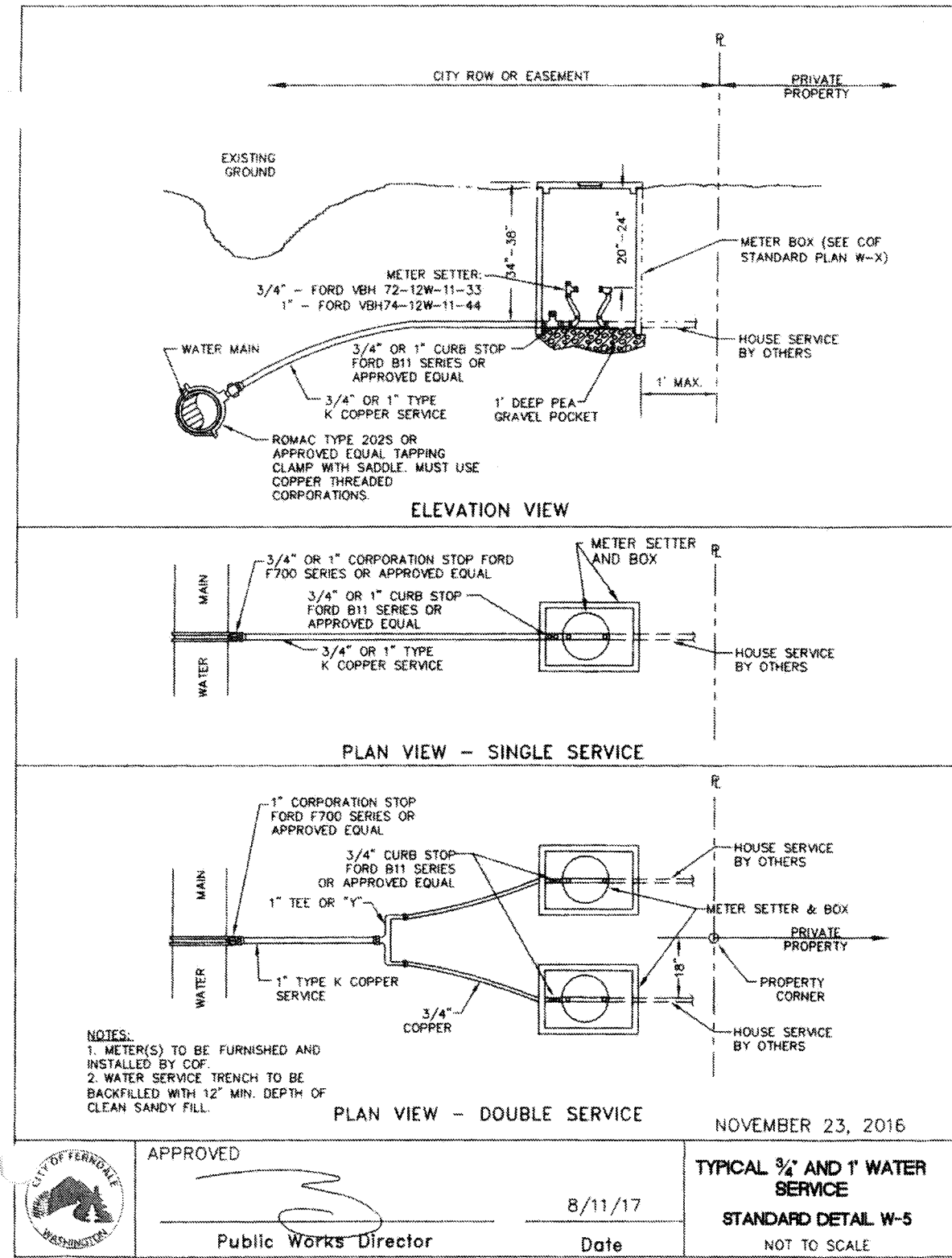
APPROVED
JAN 30 2019
BY: *Kevin Renz*
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT

ENGINEER'S CERTIFICATION:
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

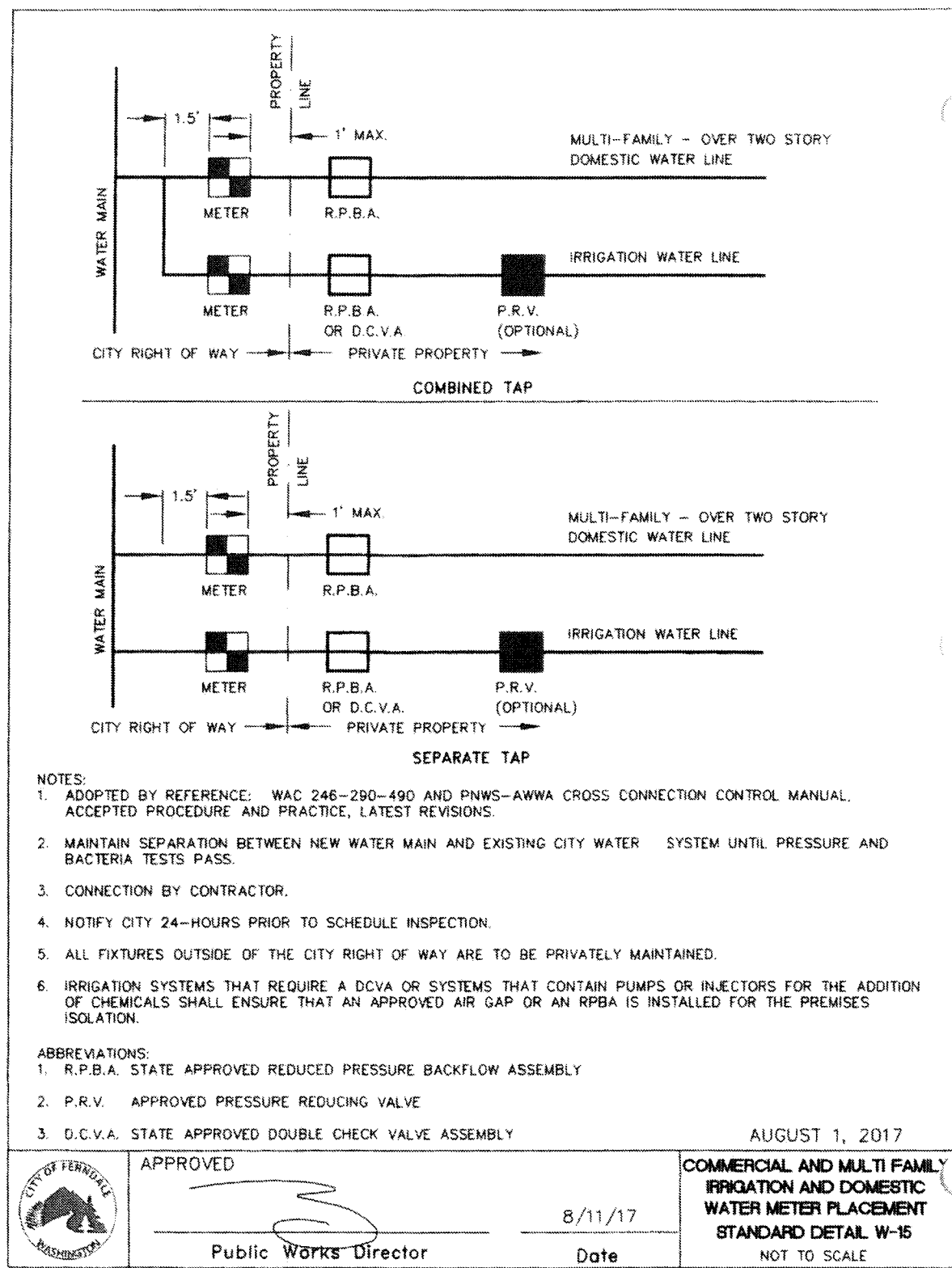
811
Know what's below.
Call before you dig.



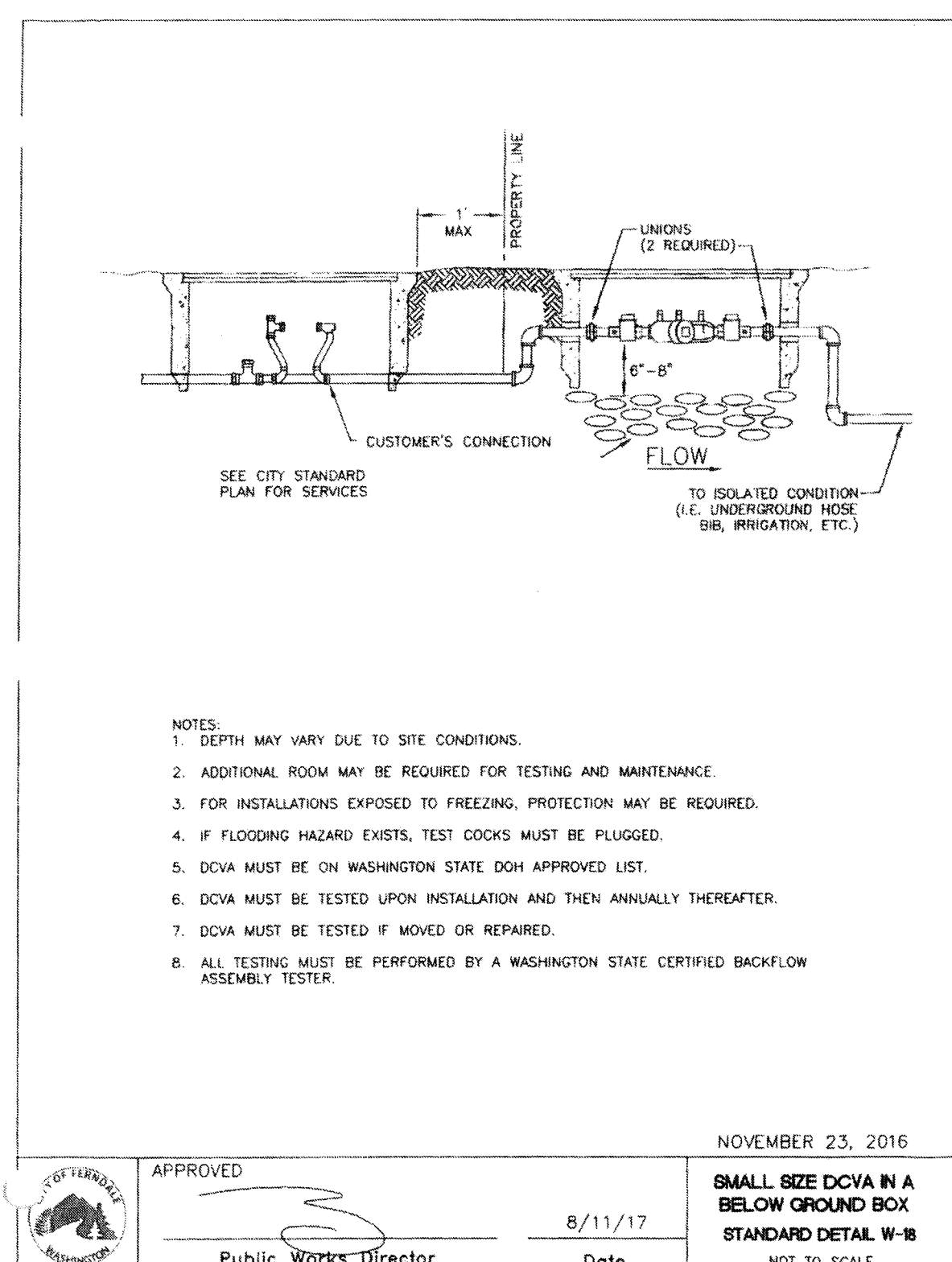
1 WATER METER DETAIL
C930 NTS



2 WATER SERVICE DETAIL
C930 NTS



3 WATER METER PLACEMENT DETAIL
C930 NTS



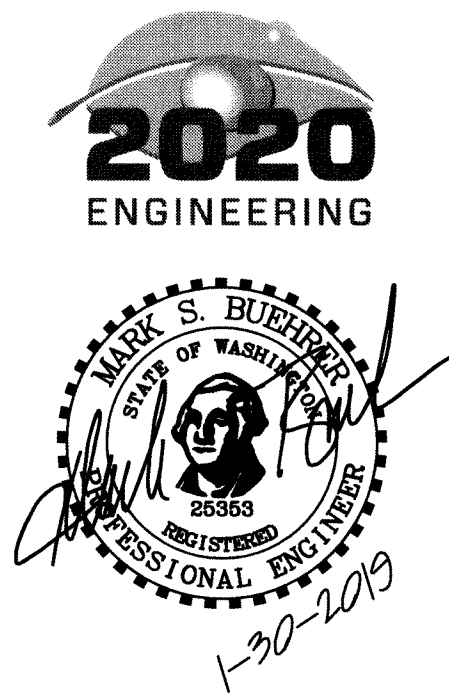
4 SMALL SIZE DCVA DETAIL
C930 NTS

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN CHRIST LUTHERAN CHURCH EXPANSION & REMODEL HAVE BEEN INSPECTED BY MARK BUEHRER AND HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.



RMC ARCHITECTS



RECORD DRAWING

**Christ Lutheran Church
Expansion & Remodel**
5904 Vista Drive, Ferndale, WA 98248

Job No: 1404 Date: 30 JAN 2019
File No:
Drawn By: M. CUPP
Checked By: M. BUEHRER
Issued For: PROJECT RECORD

CIVIL DETAILS

C930

RMC Architects, PLLC • 1223 Railroad Avenue • Bellingham, WA 98225
P: 360.676.7733 • F: 360.738.0448 • www.rmcarchitects.com

00661.018.21/19 KB