

ES566 12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS

PROJECT DESCRIPTION

CONSTRUCT SIDEWALKS AND ON-STREET PARKING ALONG FINNEGAN WAY. CONSTRUCT CURB RAMPS AND TRAFFIC SIGNAL SYSTEM AT 12TH ST AND MILL AVE INTERSECTION. CONSTRUCT CURB RAMPS AND RRFB SYSTEM AT 12TH ST AND MCKENZIE AVE.

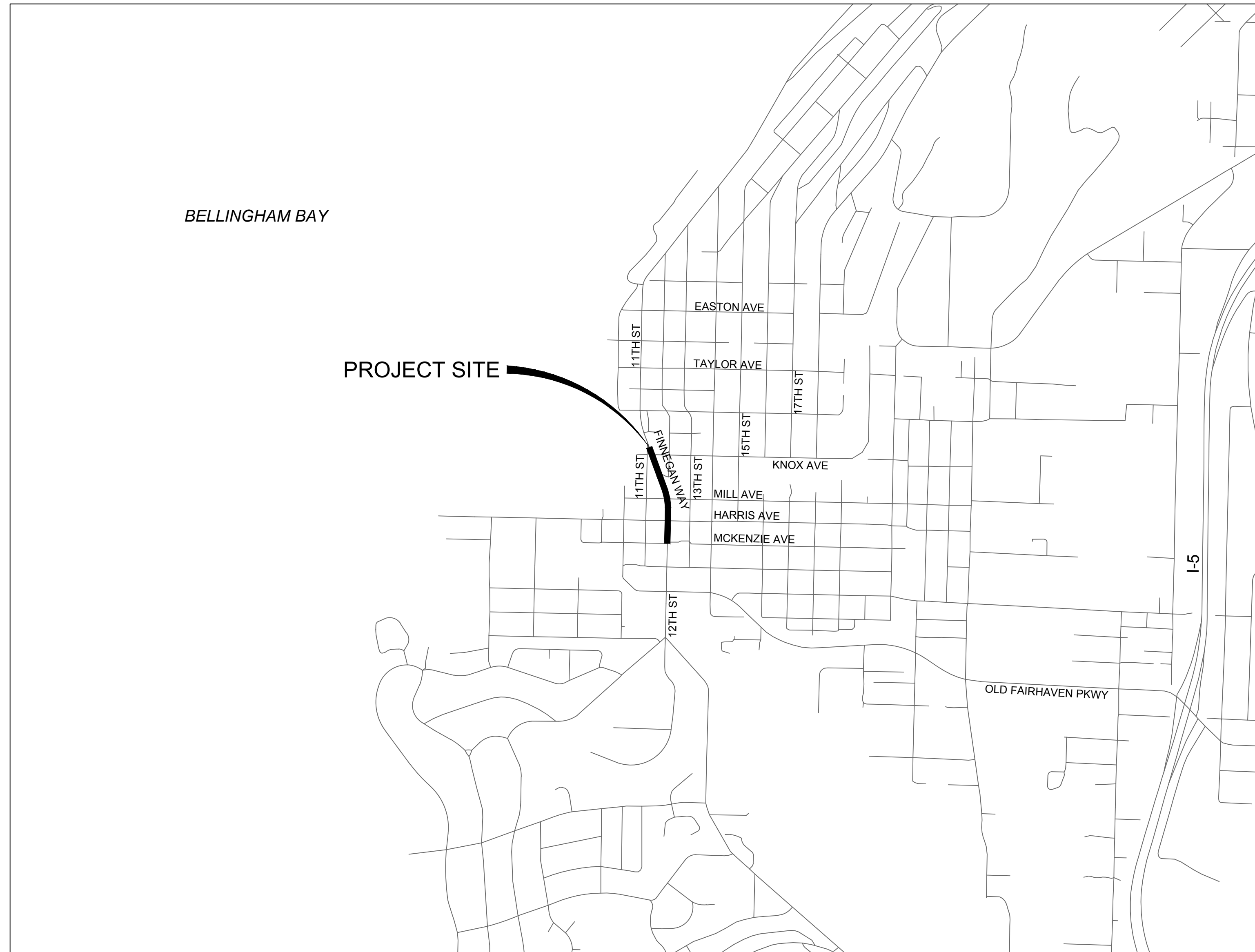
PROJECT CONTACTS

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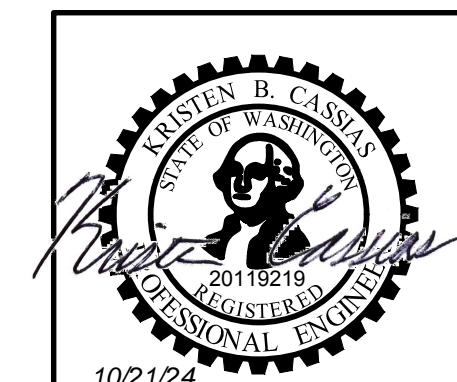
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PROJECT AREA MAP

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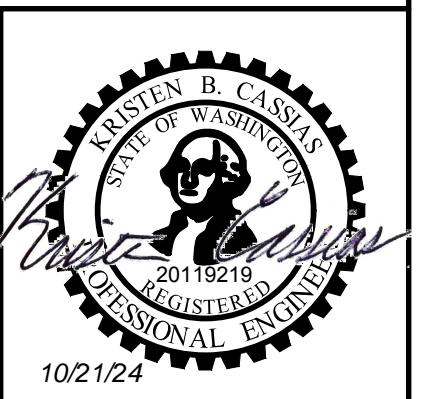
Osborn Consulting

COV

4 3 2 1	Revision	By	PROJECT ENGINEER <u>KBC</u> DESIGNED/DRAWN <u>JK/IN/TK</u> INSPECTOR _____	DIRECTOR PUBLIC WORKS <u>M.A.O.</u> CITY ENGINEER <u>M.L.W.</u> ASSISTANT DIRECTOR <u>M.A.O.</u>	CITY OF BELLINGHAM, WASHINGTON PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SCALE Horiz. <u>AS NOTED</u> Vert. <u>AS NOTED</u>	DATUM NAD 83/98 NAVD 88	Job. No. <u>ES566</u> Date <u>8/9/2024</u> Field Bk. _____	12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS COVER	SHEET 1 OF 51
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GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF BELLINGHAM STANDARDS, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT)/AMERICAN PUBLIC WORKS ASSOCIATION (APWA) STANDARDS, THE PLANS, AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
3. A COPY OF THE APPROVED PLANS AND SPECIFICATIONS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. ANY EXISTING PUBLIC AND PRIVATE FEATURES, NOT IDENTIFIED FOR REMOVAL, DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE PRIOR TO FINAL INSPECTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC STREETS FREE OF MUD AND DEBRIS AT ALL TIMES. THE CONTRACTOR SHALL BE PREPARED TO USE POWER SWEEPERS OR OTHER EQUIPMENT NECESSARY TO KEEP THE ROADWAYS CLEAN AT NO COST TO THE CITY.
6. LOCATE AND PROTECT EXISTING UTILITIES AND FEATURES WITHIN THE PROJECT LIMITS PRIOR TO BEGINNING GROUND DISTURBING WORK. DAMAGE TO UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. THE LOCATIONS OF EXISTING FEATURES AND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THESE PLANS. CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER (1-800-424-5555) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
7. POTHOLE LOCATIONS AS NECESSARY TO LOCATE UNDERGROUND UTILITIES. ADDITIONAL POTHOLING MAY BE NECESSARY TO LOCATE UTILITIES AND WILL BE CONDUCTED AT THE UNIT BID PRICE AT THE DISCRETION OF THE ENGINEER.
8. MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES UNLESS PRIOR APPROVAL HAS BEEN OBTAINED BY THE CONTRACTOR FROM THE CITY OF BELLINGHAM AND PROPERTY OWNER. THE CONTRACTOR SHALL NOTIFY RESIDENTS AND BUSINESSES 48 HOURS IN ADVANCE OF ANY WORK AFFECTING ACCESS OR SERVICE AND SHALL MINIMIZE INTERRUPTIONS TO DRIVEWAYS FOR RESIDENTS AND BUSINESSES ADJACENT TO THE PROJECT.
9. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL PRIOR TO BEGINNING CONSTRUCTION. MAINTAIN TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AND FEATURES IN WORKING ORDER THROUGH THE DURATION OF CONSTRUCTION.
10. ALL LAWN AND VEGETATED AREAS OUTSIDE THE PROJECT LIMITS DISTURBED BY CONSTRUCTION EQUIPMENT, VEHICLE OR PERSONNEL SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, AT THE CONTRACTOR'S EXPENSE.
11. FIELD STAKE FINAL CURB AND EDGE OF PAVEMENT LOCATIONS TO BE APPROVED BY THE CITY OF BELLINGHAM PRIOR TO CONSTRUCTION. THE LOCATIONS OF PROPOSED FEATURES SHOWN IN THESE PLANS ARE APPROXIMATE AND SUBJECT TO MINOR REVISIONS BY THE CITY OF BELLINGHAM.
12. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT.
13. THE CONTRACTOR IS RESPONSIBLE FOR DISPERSING WATER FOR DUST CONTROL ONTO UN-PAVED TRAFFIC LANES THAT ARE OPEN FOR PUBLIC USE AS DIRECTED BY THE ENGINEER.
14. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ALL EXISTING SURVEY MONUMENTS DURING CONSTRUCTION. ALL SURVEY MONUMENTS THAT MAY BE DISTURBED BY CONSTRUCTION SHALL BE IDENTIFIED, REFERENCED, AND REPLACED IN ACCORDANCE WITH RECOGNIZED SURVEYING PRACTICES BY A LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER PRIOR TO DESTRUCTION OF MONUMENTS.
15. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF BELLINGHAM ENGINEERING DIVISION PRIOR TO BEGINNING CONSTRUCTION.
16. PUSHBUTTONS FOR SIGNALS AND BEACONS SHALL BE PLACED WITHIN A 9 INCH REACH FROM CURB RAMP LANDING AREAS, PER ADA ACCESSIBILITY GUIDELINES.
17. THE CONTRACTOR SHALL VERIFY FOUNDATION LOCATIONS ARE FREE OF UTILITY CONFLICTS.
18. THE LOCATIONS OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION WORK.
19. ANY EXISTING UTILITIES THAT ARE IN SERVICE SHALL REMAIN OPERATIONAL AT ALL TIMES.
20. ANY SIDEWALK, LANDSCAPE, SHOULDER, OR ROADWAY DISTURBED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF JUNCTION BOXES AND CONDUIT, SHALL BE RESTORED TO EQUAL OR BETTER CONDITIONS. FULL DEPTH SAWCUT REQUIRED AT PAVEMENT PATCH EDGE FOR ROADWAY TRENCH WORK. ALL SIDEWALK AND CONCRETE ROADWAY REPAIR SHALL BE DONE TO FULL DEPTH BY WHOLE PANELS BETWEEN SIDEWALK JOINTS. PARTIAL PANEL REPLACEMENT OF SIDEWALKS AND CONCRETE ROADWAY WILL NOT BE ALLOWED UNLESS INDICATED ON THE PLANS. USE CDF IF COMPACTION CANNOT BE ACHIEVED UNDER ADJACENT SIDEWALK.
21. CONTRACTOR SHALL SUBMIT ALL MATERIAL CUT SHEETS TO THE CITY ENGINEER FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION.



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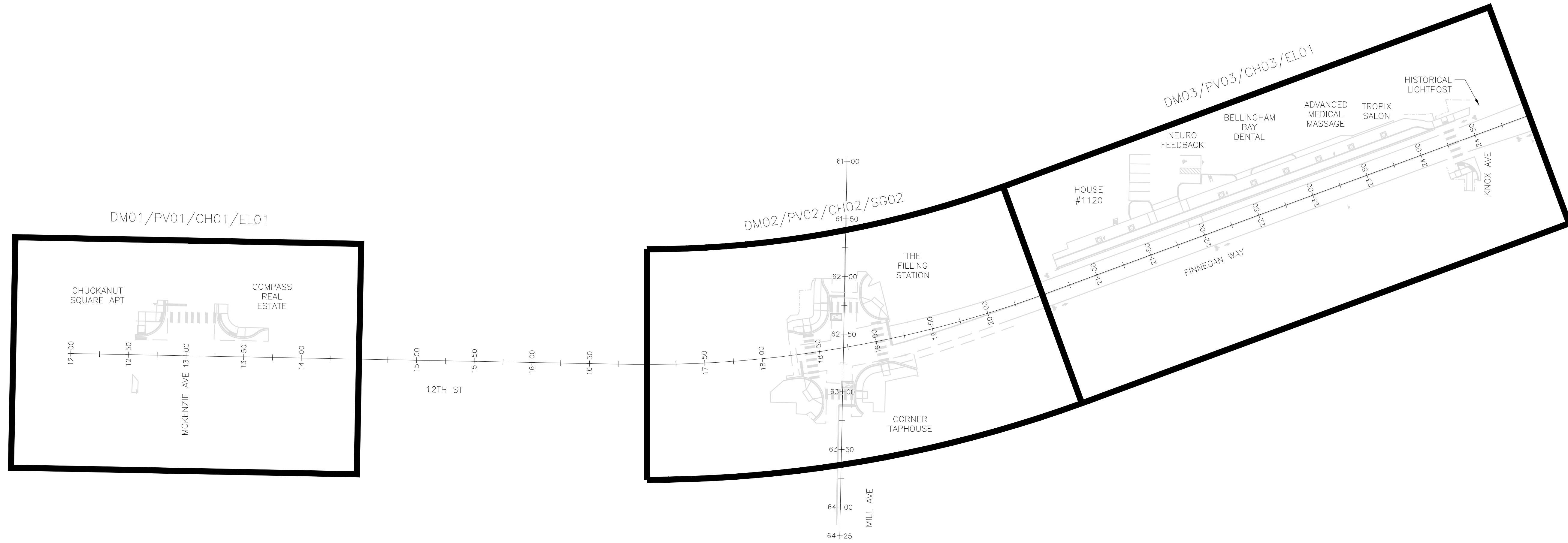
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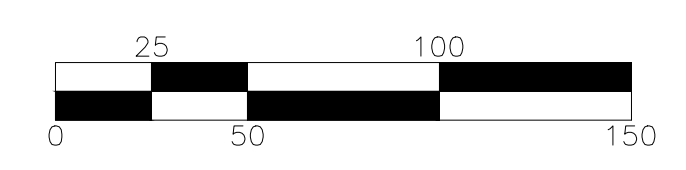
12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS

NOTES

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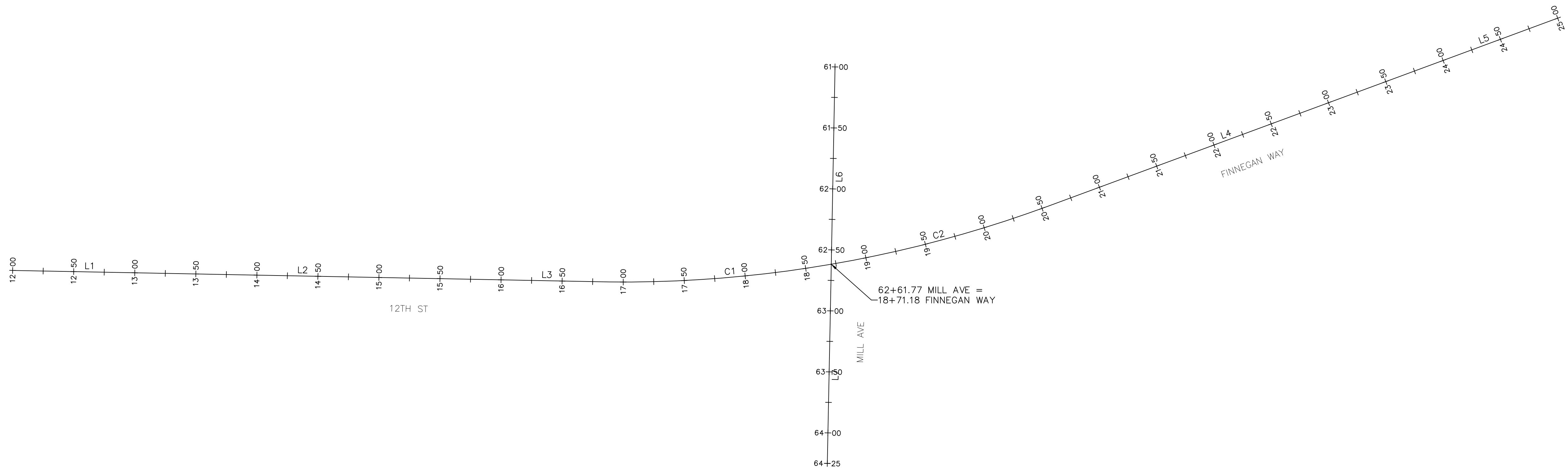
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12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
SHEET MAP

SHEET 3 OF 51

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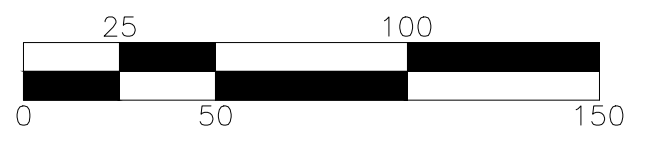
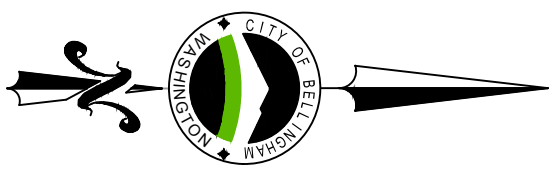


CL-FINN							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L1	NA	100.03	N1° 10' 38.44"E	12+00.00	N: 631455.31, E: 1237561.42	13+00.03	N: 631555.32, E: 1237563.48
L2	NA	289.96	N1° 10' 31.06"E	13+00.03	N: 631555.32, E: 1237563.48	15+89.99	N: 631845.23, E: 1237569.42
L3	NA	98.40	N1° 12' 18.73"E	15+89.99	N: 631845.23, E: 1237569.42	16+88.39	N: 631943.60, E: 1237571.49
C1	1005.30	182.78	N4° 29' 05.43"W	16+88.39	N: 631943.60, E: 1237571.49	18+71.18	N: 632125.58, E: 1237557.22
C2	1005.30	184.12	N14° 56' 25.95"W	18+71.18	N: 632125.58, E: 1237557.22	20+55.30	N: 632303.23, E: 1237509.82
L4	NA	305.98	N20° 11' 15.00"W	20+55.30	N: 632303.23, E: 1237509.82	23+61.28	N: 632590.41, E: 1237404.22
L5	NA	138.72	N20° 11' 53.00"W	23+61.28	N: 632590.41, E: 1237404.22	25+00.00	N: 632720.60, E: 1237356.33

CL-MILL							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L6	NA	179.87	S88° 50' 19.85"E	61+00.00	N: 632128.85, E: 1237395.48	62+79.87	N: 632125.21, E: 1237575.31
L7	NA	145.13	S88° 47' 13.35"E	62+79.87	N: 632125.21, E: 1237575.31	64+25.00	N: 632122.14, E: 1237720.41



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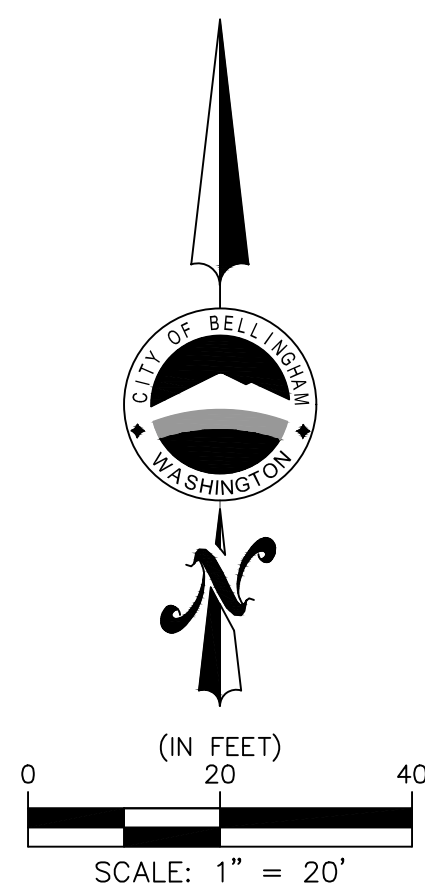
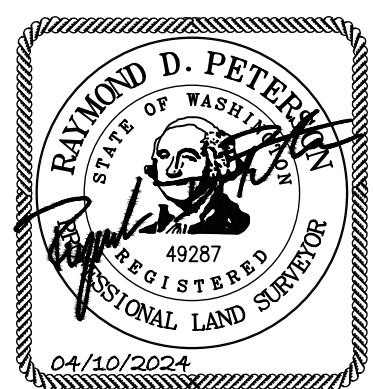
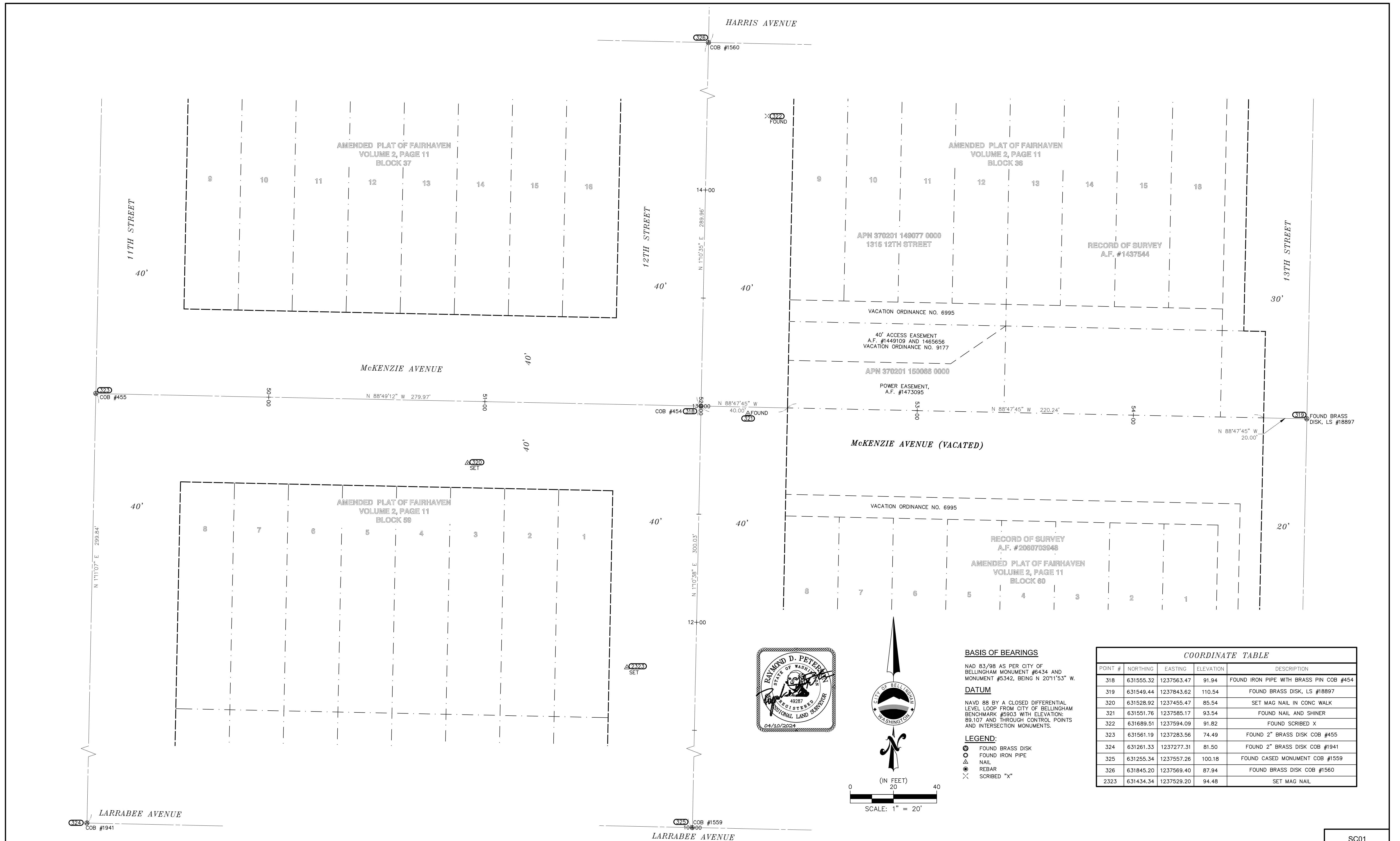
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12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
ALIGNMENT

SHEET
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51



BASIS OF BEARINGS
 NAD 83/98 AS PER CITY OF BELLINGHAM MONUMENT #6434 AND MONUMENT #5342, BEING N 20°11'53" W.

DATUM
 NAVD 88 BY A CLOSED DIFFERENTIAL LEVEL LOOP FROM CITY OF BELLINGHAM BENCHMARK #5903 WITH ELEVATION: 89.107 AND THROUGH CONTROL POINTS AND INTERSECTION MONUMENTS.

LEGEND:
 ○ FOUND BRASS DISK
 ● FOUND IRON PIPE
 △ NAIL
 ⊙ REBAR
 × SCRIBED "X"

COORDINATE TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
318	631555.32	1237563.47	91.94	FOUND IRON PIPE WITH BRASS PIN COB #454
319	631549.44	1237843.62	110.54	FOUND BRASS DISK, LS #18897
320	631528.92	1237455.47	85.54	SET MAG NAIL IN CONC WALK
321	631551.76	1237585.17	93.54	FOUND NAIL AND SHINER
322	631689.51	1237594.09	91.82	FOUND SCRIBED X
323	631561.19	1237283.56	74.49	FOUND 2" BRASS DISK COB #455
324	631261.33	1237277.31	81.50	FOUND 2" BRASS DISK COB #1941
325	631255.34	1237557.26	100.18	FOUND CASED MONUMENT COB #1559
326	631845.20	1237569.40	87.94	FOUND BRASS DISK COB #1560
2323	631434.34	1237529.20	94.48	SET MAG NAIL

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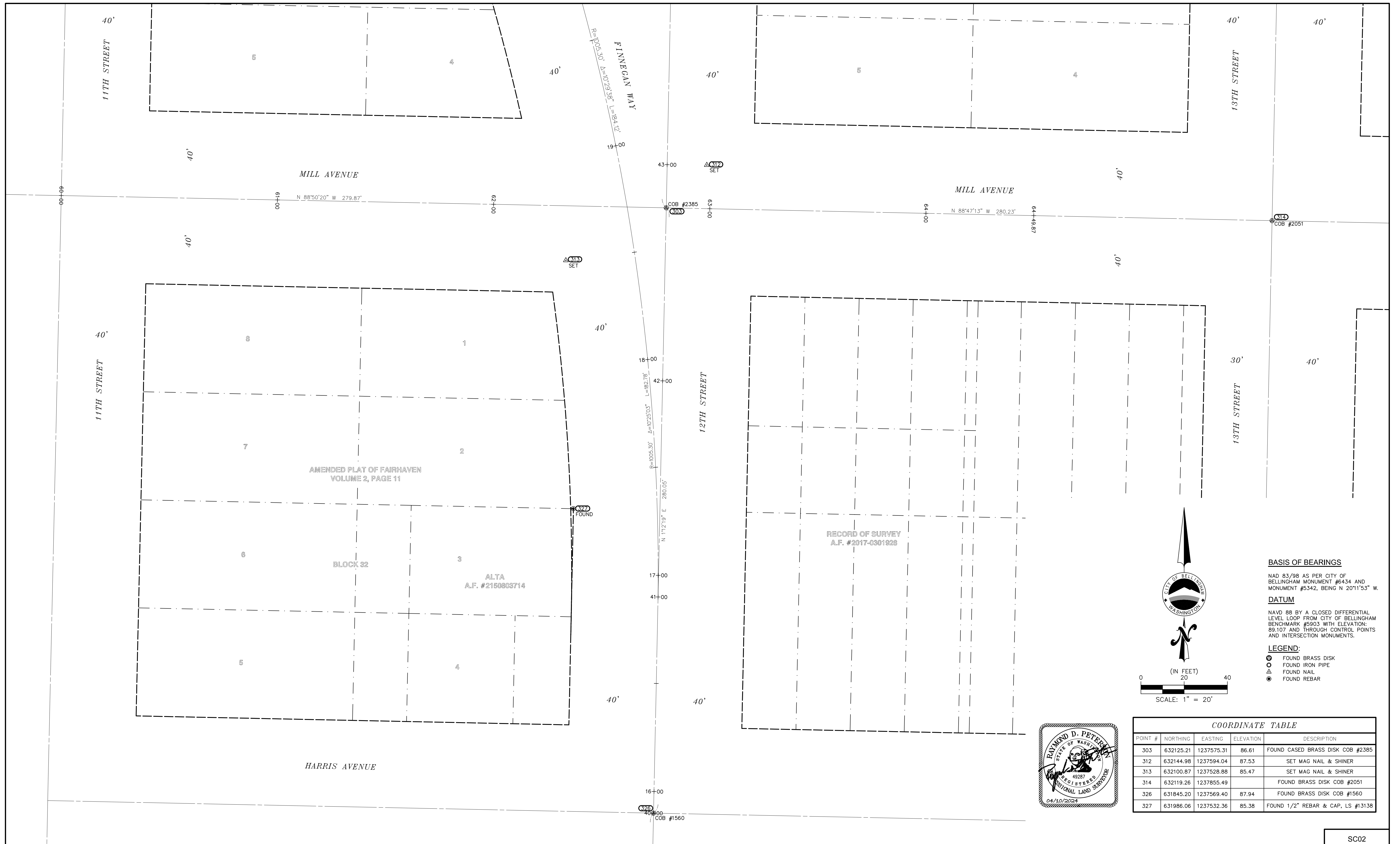
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12TH AND FINNEGAN IMPROVEMENTS
 SURVEY CONTROL

SC01
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BASIS OF BEARINGS

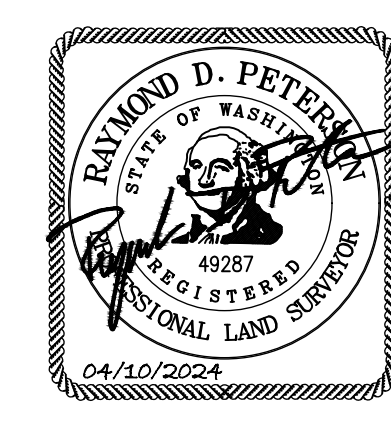
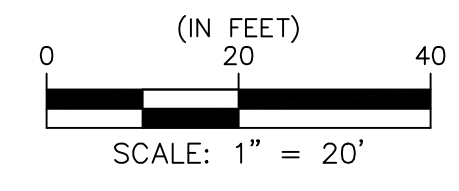
NAD 83/98 AS PER CITY OF BELLINGHAM MONUMENT #6434 AND MONUMENT #5342, BEING N 20°11'53" W.

DATUM

NAVD 88 BY A CLOSED DIFFERENTIAL LEVEL LOOP FROM CITY OF BELLINGHAM BENCHMARK #5903 WITH ELEVATION: 89.107 AND THROUGH CONTROL POINTS AND INTERSECTION MONUMENTS.

LEGEND:

- FOUND BRASS DISK
- FOUND IRON PIPE
- △ FOUND NAIL
- ⦿ FOUND REBAR



COORDINATE TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
303	632125.21	1237575.31	86.61	FOUND CASED BRASS DISK COB #2385
312	632144.98	1237594.04	87.53	SET MAG NAIL & SHINER
313	632100.87	1237528.88	85.47	SET MAG NAIL & SHINER
314	632119.26	1237855.49		FOUND BRASS DISK COB #2051
326	631845.20	1237569.40	87.94	FOUND BRASS DISK COB #1560
327	631986.06	1237532.36	85.38	FOUND 1/2" REBAR & CAP. LS #13138

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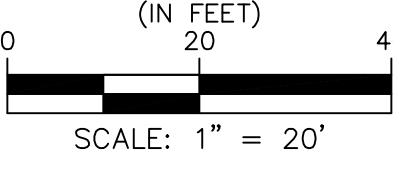
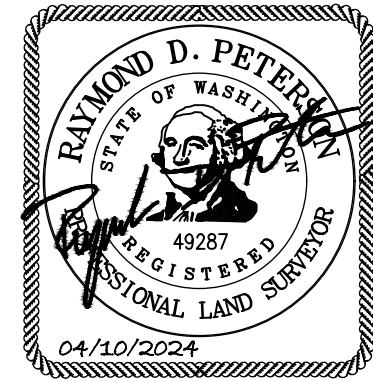
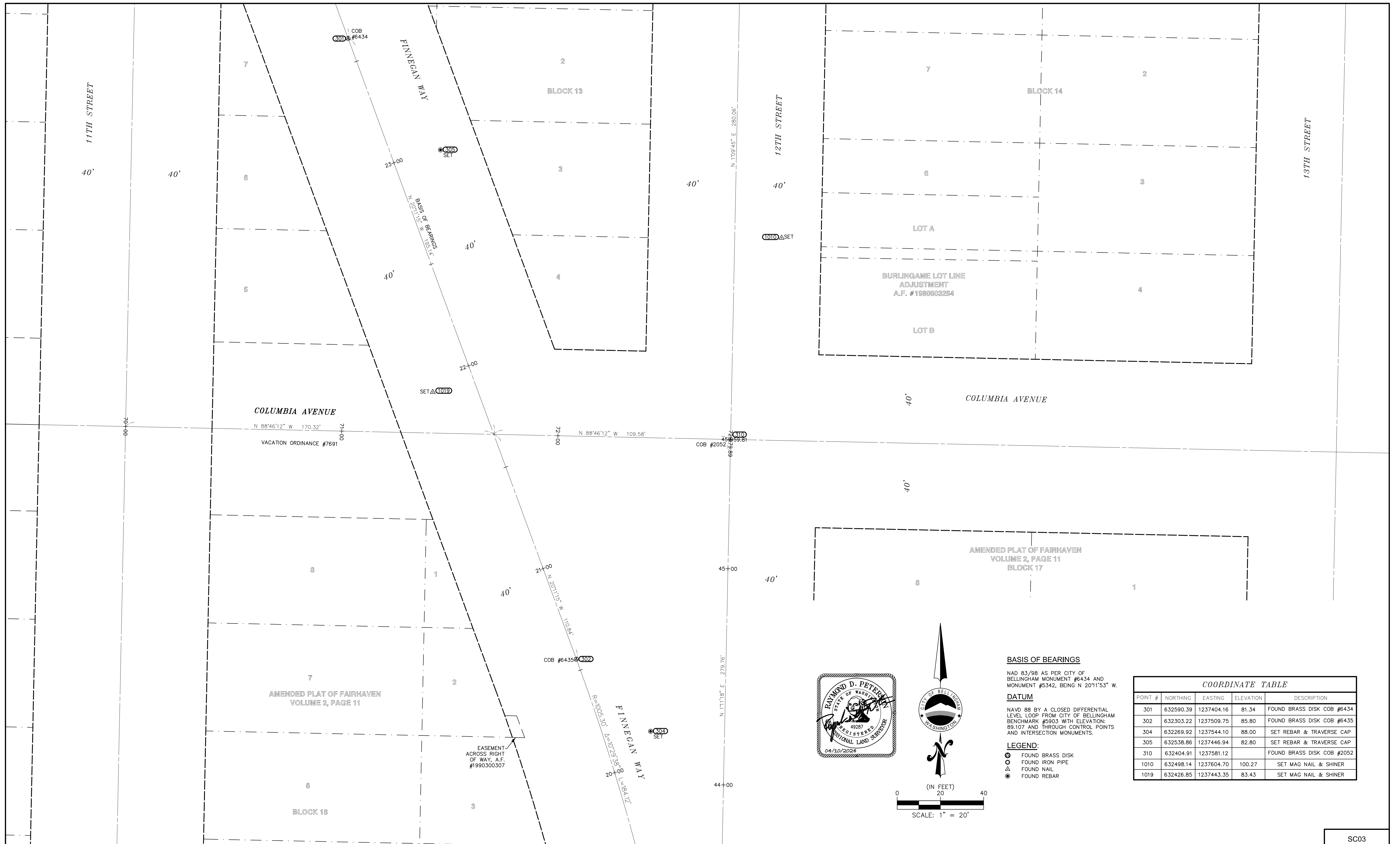
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12TH AND FINNEGAN IMPROVEMENTS
 SURVEY CONTROL

SC02
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BASIS OF BEARINGS

NAD 83/98 AS PER CITY OF BELLINGHAM MONUMENT #6434 AND MONUMENT #5342, BEING N 20°11'53" W.

DATUM

NAVD 88 BY A CLOSED DIFFERENTIAL LEVEL LOOP FROM CITY OF BELLINGHAM BENCHMARK #5903 WITH ELEVATION: 89.107 AND THROUGH CONTROL POINTS AND INTERSECTION MONUMENTS.

LEGEND:

- FOUND BRASS DISK
- FOUND IRON PIPE
- △ FOUND NAIL
- FOUND REBAR

COORDINATE TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
301	632590.39	1237404.16	81.34	FOUND BRASS DISK COB #6434
302	632303.22	1237509.75	85.80	FOUND BRASS DISK COB #6435
304	632269.92	1237544.10	88.00	SET REBAR & TRAVERSE CAP
305	632538.86	1237446.94	82.80	SET REBAR & TRAVERSE CAP
310	632404.91	1237581.12		FOUND BRASS DISK COB #2052
1010	632498.14	1237604.70	100.27	SET MAG NAIL & SHINER
1019	632426.85	1237443.35	83.43	SET MAG NAIL & SHINER

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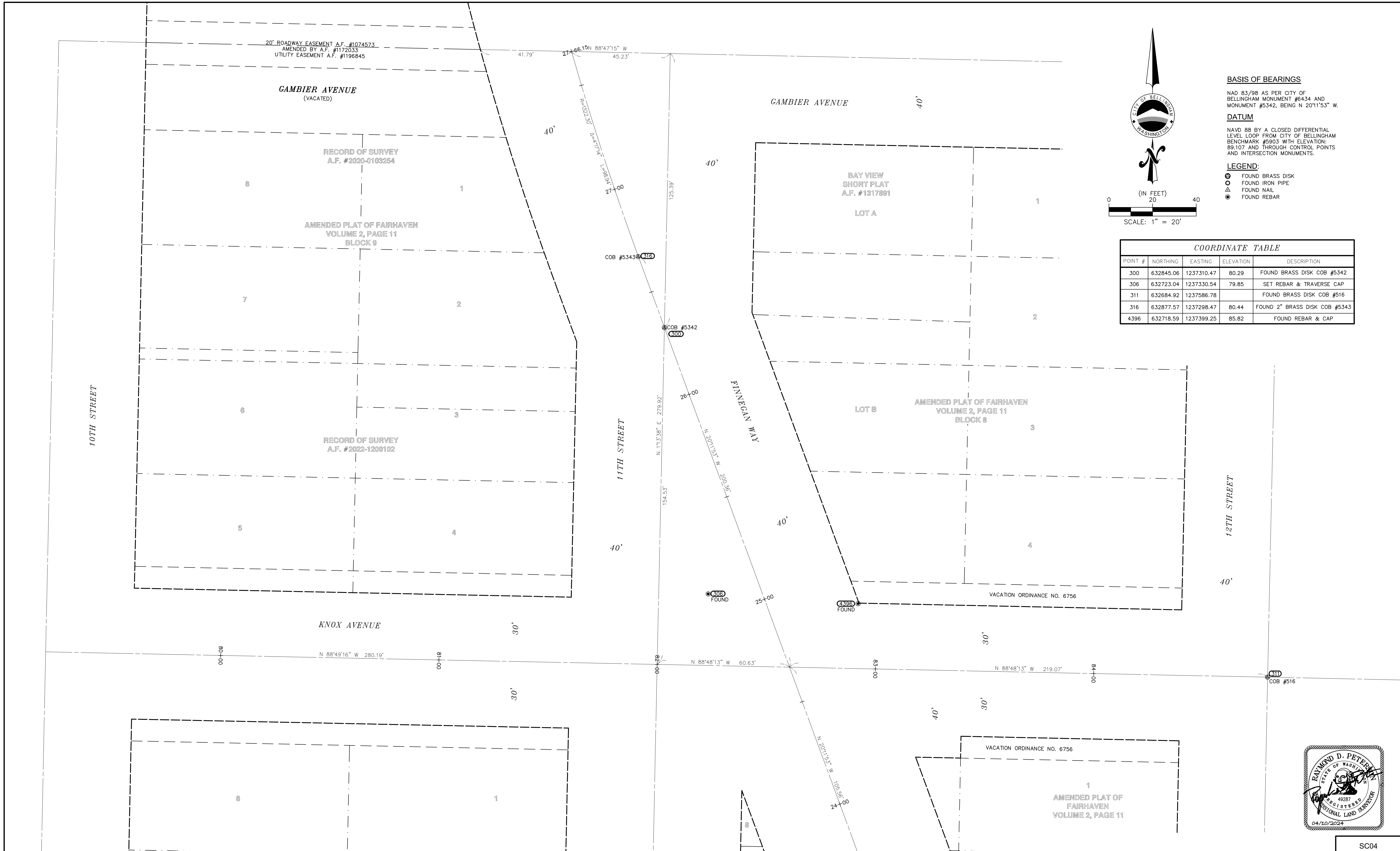
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12TH AND FINNEGAN IMPROVEMENTS
 SURVEY CONTROL

SC03
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BASIS OF BEARINGS
 NAD 83/98 AS PER CITY OF BELLINGHAM MONUMENT #6434 AND MONUMENT #5342, BEING N 20°11'53" W.

DATUM
 NAVD 88 BY A CLOSED DIFFERENTIAL LEVEL LOOP FROM CITY OF BELLINGHAM BENCHMARK #5903 WITH ELEVATION: 89.107 AND THROUGH CONTROL POINTS AND INTERSECTION MONUMENTS.

LEGEND:
 ● FOUND BRASS DISK
 ○ FOUND IRON PIPE
 △ FOUND NAIL
 ⊙ FOUND REBAR

COORDINATE TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
300	632845.06	1237310.47	80.29	FOUND BRASS DISK COB #5342
306	632723.04	1237330.54	79.85	SET REBAR & TRAVERSE CAP
311	632684.92	1237586.78		FOUND BRASS DISK COB #516
316	632877.57	1237298.47	80.44	FOUND 2" BRASS DISK COB #5343
4396	632718.59	1237399.25	85.82	FOUND REBAR & CAP

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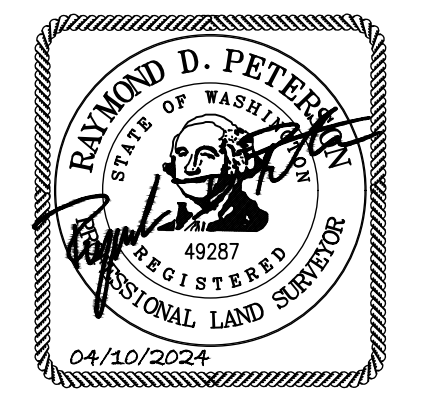
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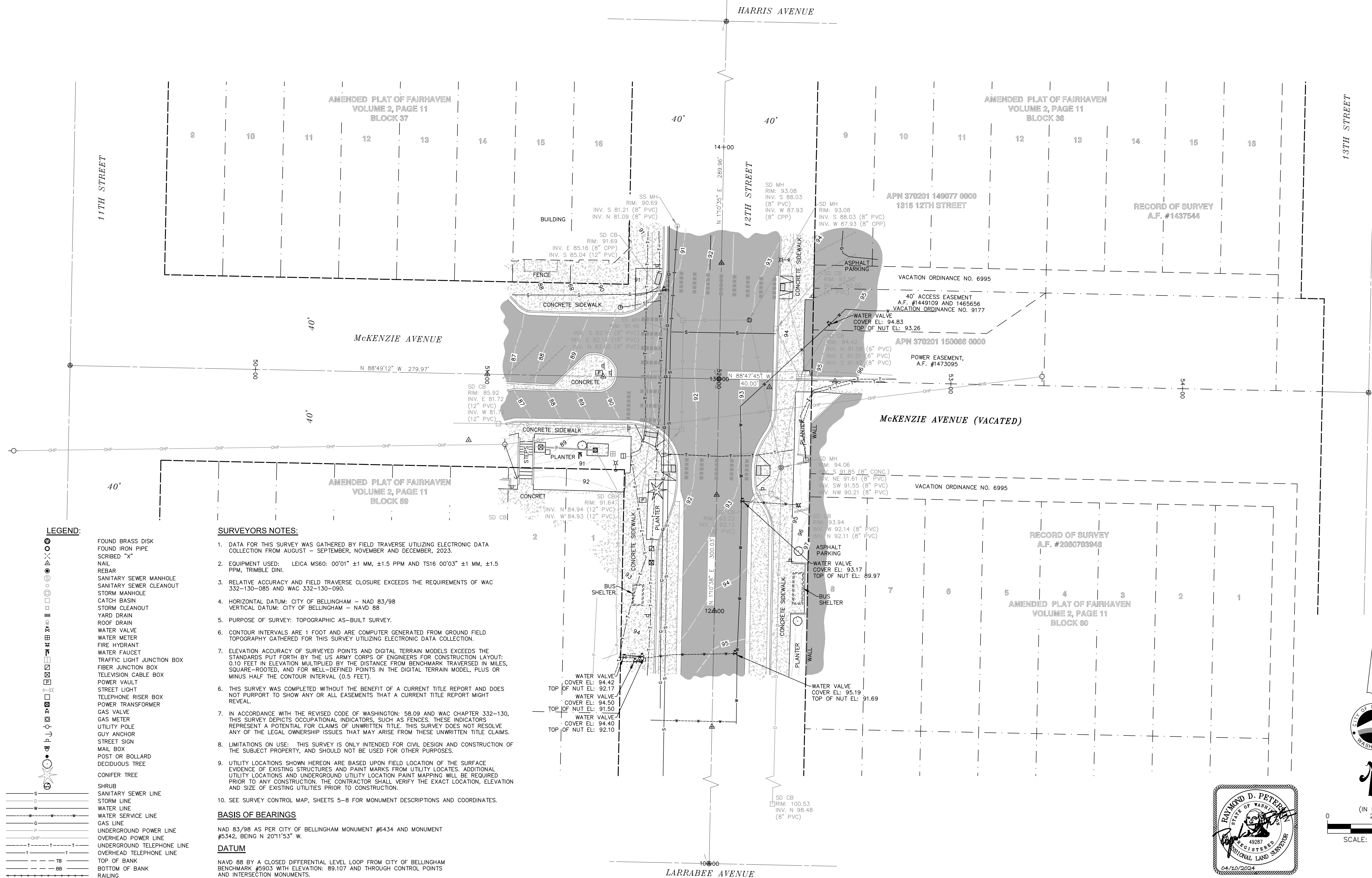
Job. No. ES-566
 Date _____
 Field Bk. 1071-1

12TH AND FINNEGAN IMPROVEMENTS
 SURVEY CONTROL

SC04
 SHEET 8 OF 51

CONTACT PERSON: KYLE CARLSON, PROJECT ENGINEER AT 360-778-7946





LEGEND:

- FOUND BRASS DISK
- FOUND IRON PIPE
- SCRIBED "X"
- NAIL
- REBAR
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- STORM MANHOLE
- CATCH BASIN
- STORM CLEANOUT
- YARD DRAIN
- ROOF DRAIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER FAUCET
- TRAFFIC LIGHT JUNCTION BOX
- FIBER JUNCTION BOX
- TELEVISION CABLE BOX
- POWER VAULT
- STREET LIGHT
- TELEPHONE RISER BOX
- POWER TRANSFORMER
- GAS VALVE
- GAS METER
- UTILITY POLE
- GUY ANCHOR
- STREET SIGN
- MAIL BOX
- POST OR BOLLARD
- DECIDUOUS TREE
- CONIFER TREE
- SHRUB
- SANITARY SEWER LINE
- STORM LINE
- WATER LINE
- WATER SERVICE LINE
- GAS LINE
- UNDERGROUND POWER LINE
- OVERHEAD POWER LINE
- UNDERGROUND TELEPHONE LINE
- OVERHEAD TELEPHONE LINE
- TOP OF BANK
- BOTTOM OF BANK
- RAILING

SURVEYORS NOTES:

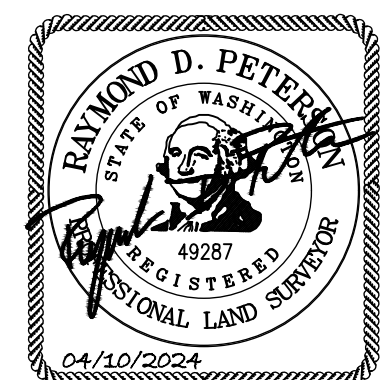
1. DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION FROM AUGUST – SEPTEMBER, NOVEMBER AND DECEMBER, 2023.
2. EQUIPMENT USED: LEICA MS60: 00'01" ±1 MM, ±1.5 PPM AND TS16 00'03" ±1 MM, ±1.5 PPM, TRIMBLE DINI.
3. RELATIVE ACCURACY AND FIELD TRAVERSE CLOSURE EXCEEDS THE REQUIREMENTS OF WAC 332-130-085 AND WAC 332-130-090.
4. HORIZONTAL DATUM: CITY OF BELLINGHAM – NAD 83/98
VERTICAL DATUM: CITY OF BELLINGHAM – NAVD 88
5. PURPOSE OF SURVEY: TOPOGRAPHIC AS-BUILT SURVEY.
6. CONTOUR INTERVALS ARE 1 FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.
7. ELEVATION ACCURACY OF SURVEYED POINTS AND DIGITAL TERRAIN MODELS EXCEEDS THE STANDARDS PUT FORTH BY THE US ARMY CORPS OF ENGINEERS FOR CONSTRUCTION LAYOUT: 0.10 FEET IN ELEVATION MULTIPLIED BY THE DISTANCE FROM BENCHMARK TRAVERSED IN MILES, SQUARE-ROOTED, AND FOR WELL-DEFINED POINTS IN THE DIGITAL TERRAIN MODEL, PLUS OR MINUS HALF THE CONTOUR INTERVAL (0.5 FEET).
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND DOES NOT PURPORT TO SHOW ANY OR ALL EASEMENTS THAT A CURRENT TITLE REPORT MIGHT REVEAL.
7. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON: 58.09 AND WAC CHAPTER 332-130, THIS SURVEY DEPICTS OCCUPATIONAL INDICATORS, SUCH AS FENCES, THESE INDICATORS REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT RESOLVE ANY OF THE LEGAL OWNERSHIP ISSUES THAT MAY ARISE FROM THESE UNWRITTEN TITLE CLAIMS.
8. LIMITATIONS ON USE: THIS SURVEY IS ONLY INTENDED FOR CIVIL DESIGN AND CONSTRUCTION OF THE SUBJECT PROPERTY, AND SHOULD NOT BE USED FOR OTHER PURPOSES.
9. UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON FIELD LOCATION OF THE SURFACE EVIDENCE OF EXISTING STRUCTURES AND PAINT MARKS FROM UTILITY LOCATES. ADDITIONAL UTILITY LOCATIONS AND UNDERGROUND UTILITY LOCATION PAINT MAPPING WILL BE REQUIRED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
10. SEE SURVEY CONTROL MAP, SHEETS 5-8 FOR MONUMENT DESCRIPTIONS AND COORDINATES.

BASIS OF BEARINGS

NAD 83/98 AS PER CITY OF BELLINGHAM MONUMENT #6434 AND MONUMENT #5342, BEING N 20°11'53" W.

DATUM

NAVD 88 BY A CLOSED DIFFERENTIAL LEVEL LOOP FROM CITY OF BELLINGHAM BENCHMARK #5903 WITH ELEVATION: 89.107 AND THROUGH CONTROL POINTS AND INTERSECTION MONUMENTS.



4			
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Date	No	Revision	By

PROJECT ENGINEER	DIRECTOR PUBLIC WORKS E.C.J.
DESIGNED/DRAWN	CITY ENGINEER M.L.W.
INSPECTOR	ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

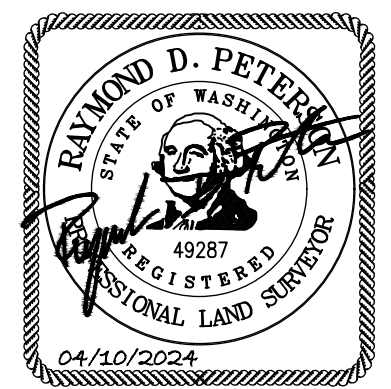
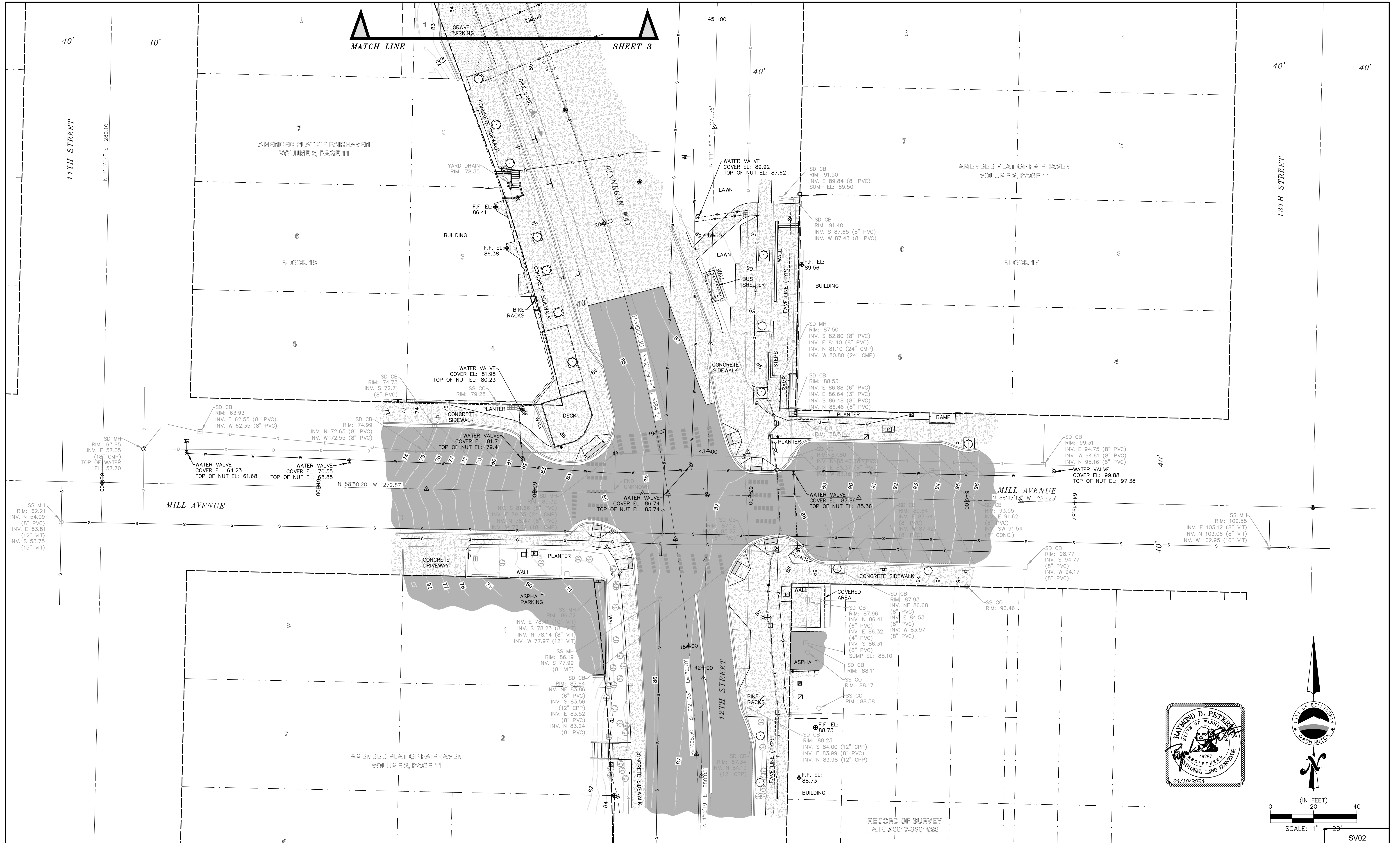
SCALE
Horiz. 1"=20'
Vert. N/A

DATUM
NAD 83/98
NAVD 88

Job. No. ES-566
Date
Field Bk. 1071-1

12TH AND FINNEGAN IMPROVEMENTS
EXISTING CONDITIONS

SV01
SHEET 9 OF 51



4			
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Date	No	Revision	By

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"=20'
Vert. N/A

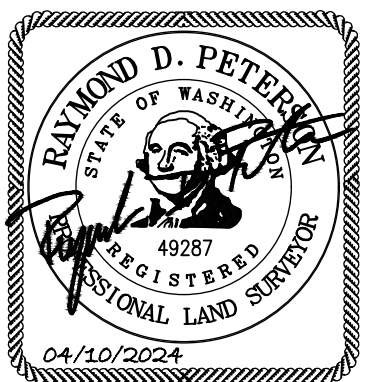
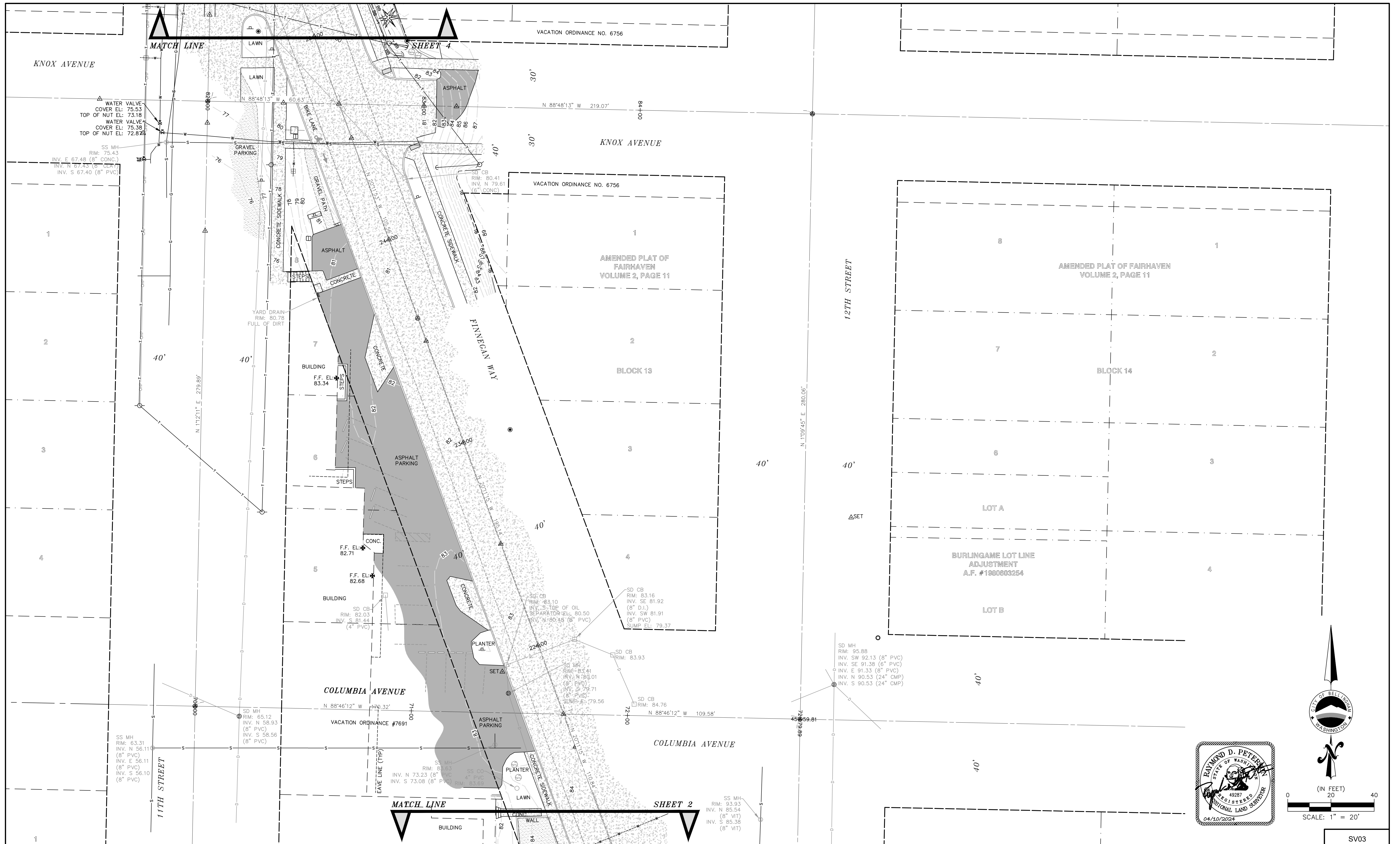
DATUM
NAD 83/98
NAVD 88

Job No. ES-566
Date
Field Bk. 1071-1

12TH AND FINNEGAN IMPROVEMENTS
EXISTING CONDITIONS

SHEET 10 OF 51
SV02

CONTACT PERSON: KYLE CARLSON, PROJECT ENGINEER AT 360-778-7946



4			
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Date	No	Revision	By

PROJECT ENGINEER
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INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"=20'
Vert. N/A

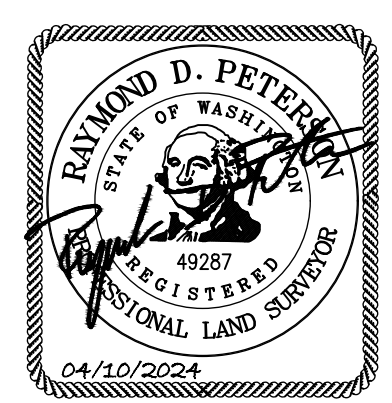
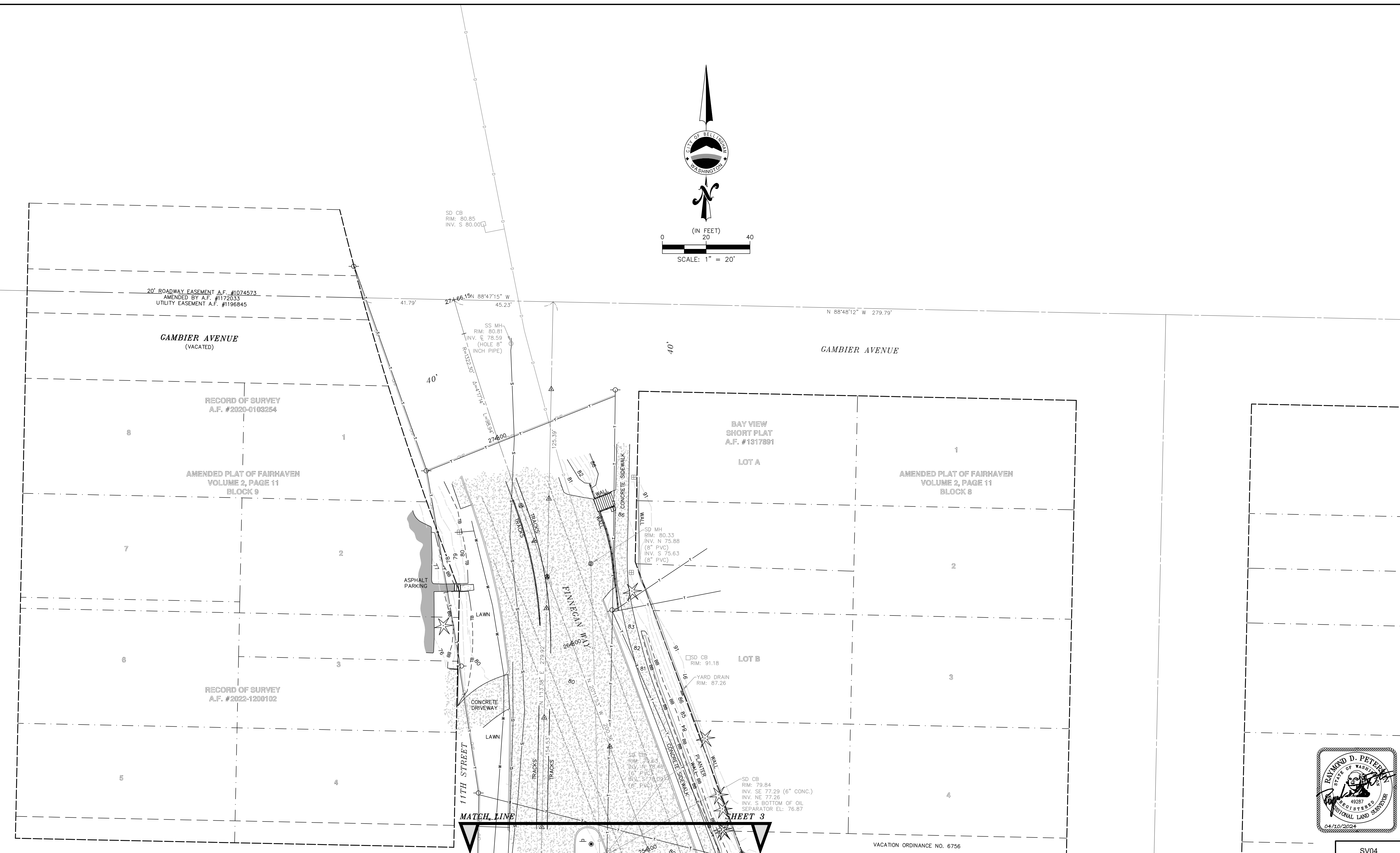
DATUM
NAD 83/98
NAVD 88

Job. No. ES-566
Date
Field Bk. 1071-1

12TH AND FINNEGAN IMPROVEMENTS
EXISTING CONDITIONS

SV03
SHEET 11 OF 51

CONTACT PERSON: KYLE CARLSON, PROJECT ENGINEER AT 360-778-7946



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Date	No	Revision	By

PROJECT ENGINEER _____
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 INSPECTOR _____

DIRECTOR PUBLIC WORKS E.C.J.
 CITY ENGINEER M.L.W.
 ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
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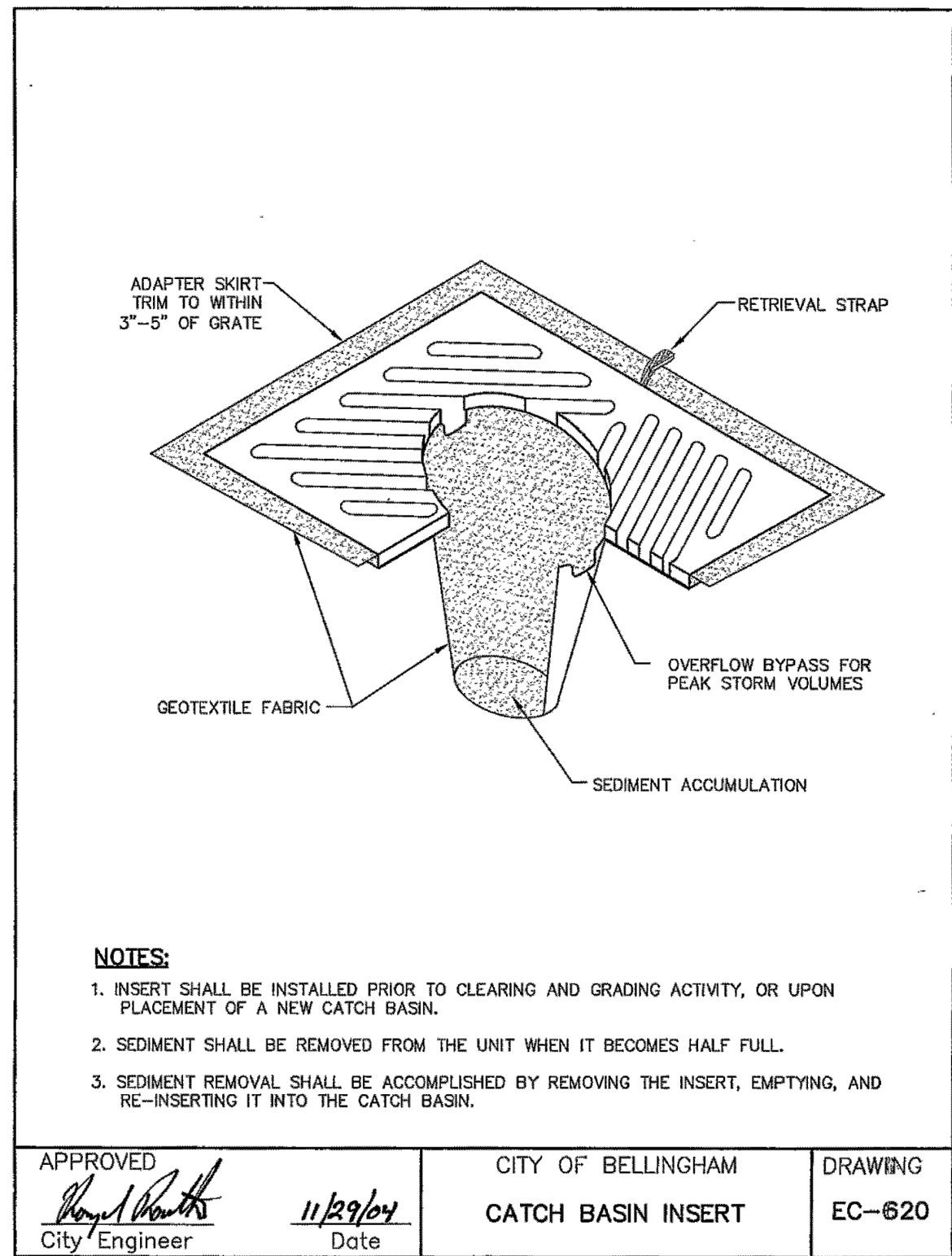
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DATUM
 NAD 83/98
 NAVD 88

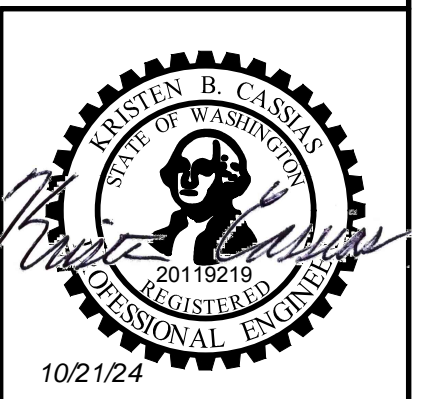
Job. No. ES-566
 Date _____
 Field Bk. 1071-1

12TH AND FINNEGAN IMPROVEMENTS
EXISTING CONDITIONS

SV04
 SHEET 12 OF 51



APPROVED <i>David Smith</i> City Engineer	11/29/24 Date	CITY OF BELLINGHAM CATCH BASIN INSERT	DRAWING EC-620
---	------------------	--	-------------------



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WHAT TRANSPORTATION CAN BE.

12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

BID SUBMITTAL



EC02

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Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
TESC DETAILS

SHEET
14 OF
51

SEC. 01, T. 37 N., R. 02 E., W.M.

DEMOLITION NOTES

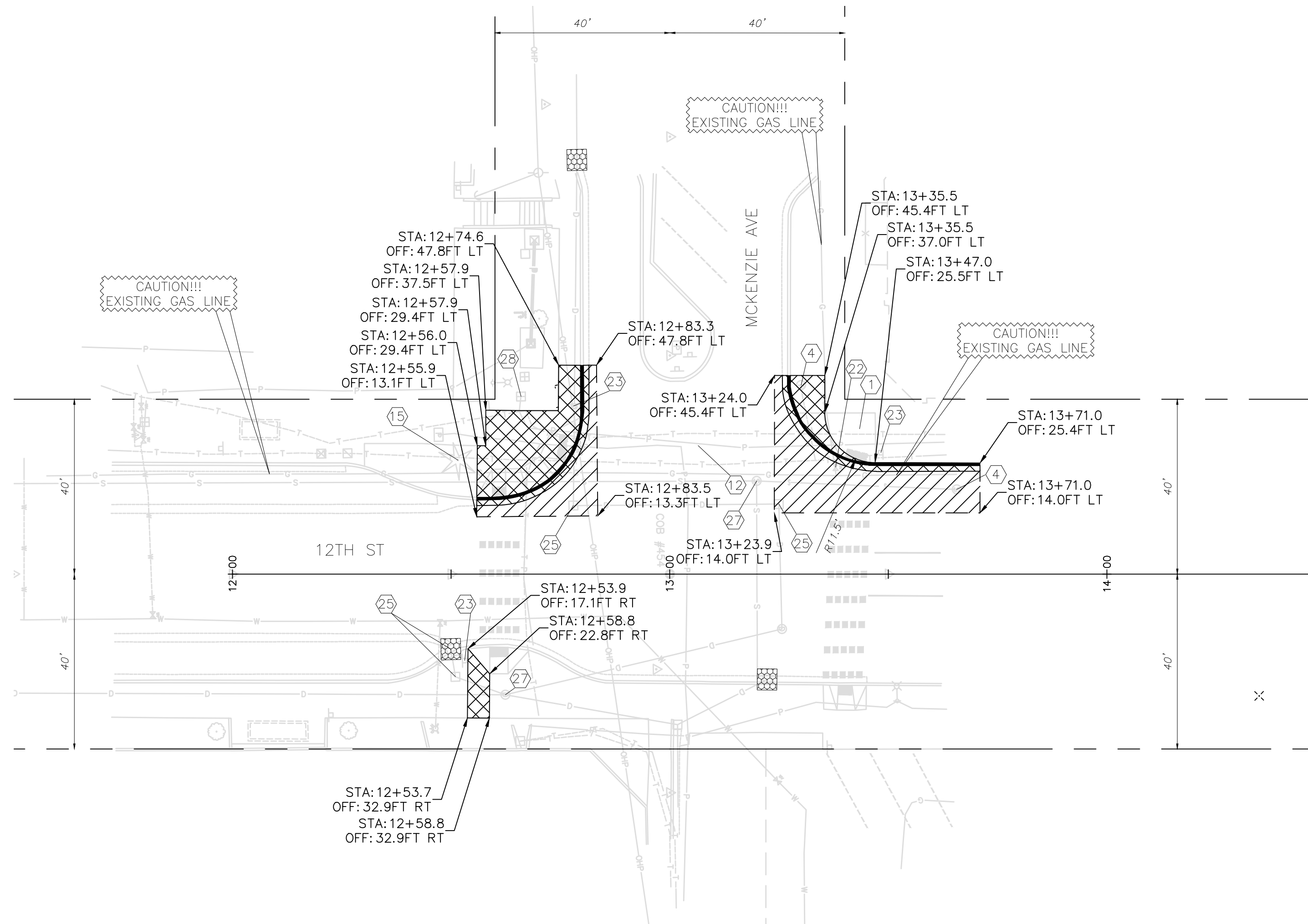
1. REMOVE CONCRETE ROADWAY PANELS & SIDEWALK TO NEAREST JOINT/SEAM.
2. ANY UTILITY STRUCTURE ADJUSTED TO FINAL GRADE WITHIN A SIDEWALK SHALL BE FITTED WITH AN ADA COMPLIANT SLIP-RESISTANT LID.

DEMOLITION CONSTRUCTION NOTES

- ① PROTECT STRUCTURAL SIDEWALK/BUILDING FOUNDATION
- ④ PROTECT EXISTING SEWER MANHOLE & ADJUST TO GRADE.
- ⑫ REMOVE EXISTING CHANNELIZATION. SEE CH01-CH03 FOR DETAILS.
- ⑮ PROTECT EXISTING TREE.
- ⑳ PROTECT EXISTING GAS VALVE & ADJUST TO GRADE.
- ㉓ EXISTING SIGN. SEE CH01-CH03 FOR DETAILS.
- ㉕ EXISTING STORM STRUCTURE. SEE DRAINAGE PLAN SHEETS DR01-DR03.
- ㉗ PROTECT EXISTING MANHOLE.
- ㉘ PROTECT EXISTING JUNCTION BOX.

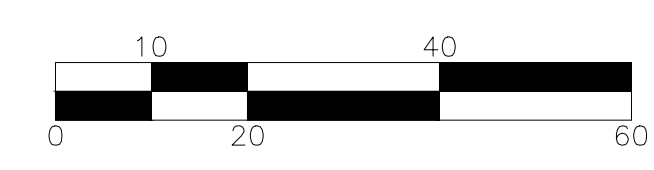
DEMO & TESC LEGEND

EXISTING ROW	-----
SAWCUT LINE	- - - - -
CONCRETE CURB REMOVAL	=====
CONCRETE REMOVAL	
CONCRETE ROADWAY REMOVAL	
ASPHALT REMOVAL	
GRAVEL REMOVAL	
CLEAR AND GRUB	
ASPHALT PLANING	
CATCH BASIN INSERT (PER COB STD. PLAN EC-620, SHEET EC02)	



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(TEL) 425 821-3665
(FAX) 425 825-8434



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DM01

4			
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Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

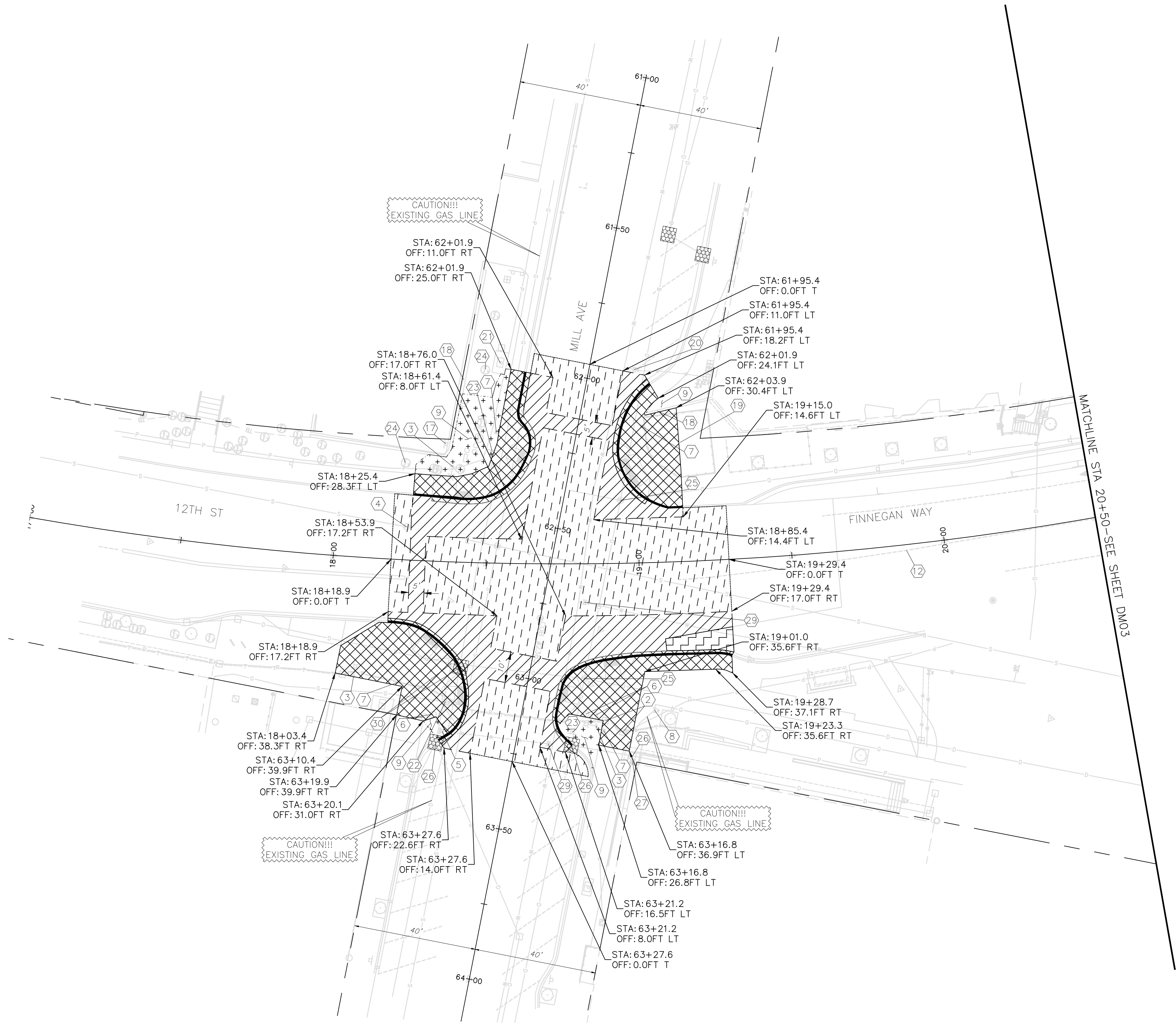
DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DEMOLITION & TESC PLAN

SHEET
15 OF
51

SEC. 01, T. 37 N., R. 02 E., W.M.



DEMOLITION NOTES

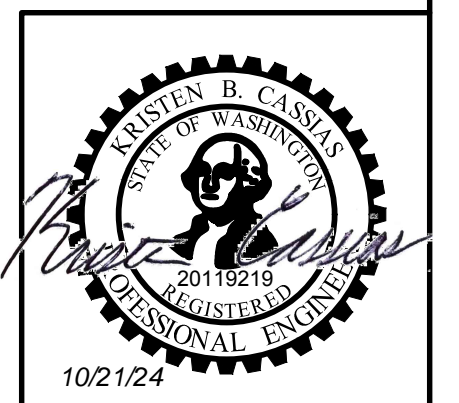
1. SEE SHEET DM01 FOR DEMOLITION PLAN NOTES.

DEMOLITION CONSTRUCTION NOTES

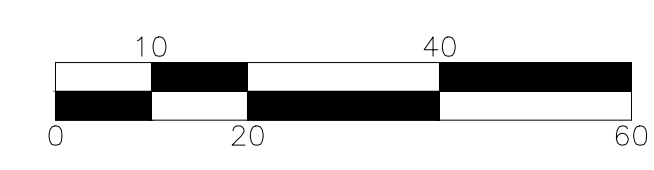
- ② EXISTING JUNCTION BOX. SEE SIGNAL PLAN SHEETS SG01-SG06.
- ③ EXISTING LUMINAIRE. SEE SG01-SG06.
- ④ PROTECT EXISTING SEWER MANHOLE & ADJUST TO GRADE.
- ⑤ PROTECT EXISTING FIRE HYDRANT.
- ⑥ TEMPORARILY REMOVE & REPLACE EXISTING TRASH & RECYCLING RECEPTACLES.
- ⑦ RELOCATE EXISTING PARKING PAY STATION.
- ⑧ PROTECT EXISTING GAS VALVE.
- ⑨ REMOVE & RELOCATE EXISTING PLANTINGS & L&SCAPE STONES ONLY AS REQUIRED FOR INSTALLATION OF SIGNAL EQUIPMENT AS SHOWN ON SHEET SG02.
- ⑫ REMOVE EXISTING CHANNELIZATION. SEE CH01-CH03 FOR DETAILS.
- ⑬ PROTECT EXISTING COMMERCIAL SIGN.
- ⑭ PROTECT EXISTING WALL.
- ⑰ EXISTING PATIO TO BE REMOVED/REPLACED BY OTHERS. COORDINATE WITH CITY OF BELLINGHAM.
- ⑳ PROTECT EXISTING WATER VALVE.
- ㉑ PROTECT EXISTING POWER VAULT.
- ㉒ PROTECT EXISTING GAS VALVE & ADJUST TO GRADE.
- ㉓ EXISTING SIGN. SEE CH01-CH03 FOR DETAILS.
- ㉔ PROTECT EXISTING VEGETATION.
- ㉕ EXISTING STORM STRUCTURE. SEE DRAINAGE PLAN SHEETS DR01-DR03.
- ㉖ PROTECT EXISTING CATCH BASIN.
- ㉗ PROTECT EXISTING MANHOLE.
- ㉘ ADJUST EXISTING WATER VALVE TO FINAL GRADE.
- ㉙ REMOVE EXISTING STORM STRUCTURE.

DEMO & TESC LEGEND

- EXISTING ROW
- SAWCUT LINE
- CONCRETE CURB REMOVAL
- CONCRETE REMOVAL
- CONCRETE ROADWAY REMOVAL
- ASPHALT REMOVAL
- GRAVEL REMOVAL
- CLEAR AND GRUB
- ASPHALT PLANING
- CATCH BASIN INSERT (PER COB STD. PLAN EC-620, SHEET EC02)



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DM02

4			
3			
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Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DEMOLITION & TESC PLAN

SHEET
16 OF
51

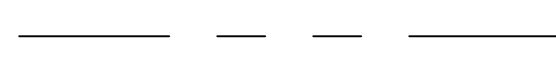
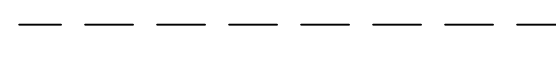
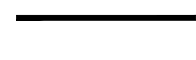

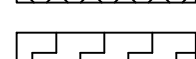



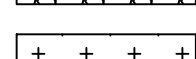
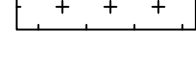
DEMOLITION NOTES

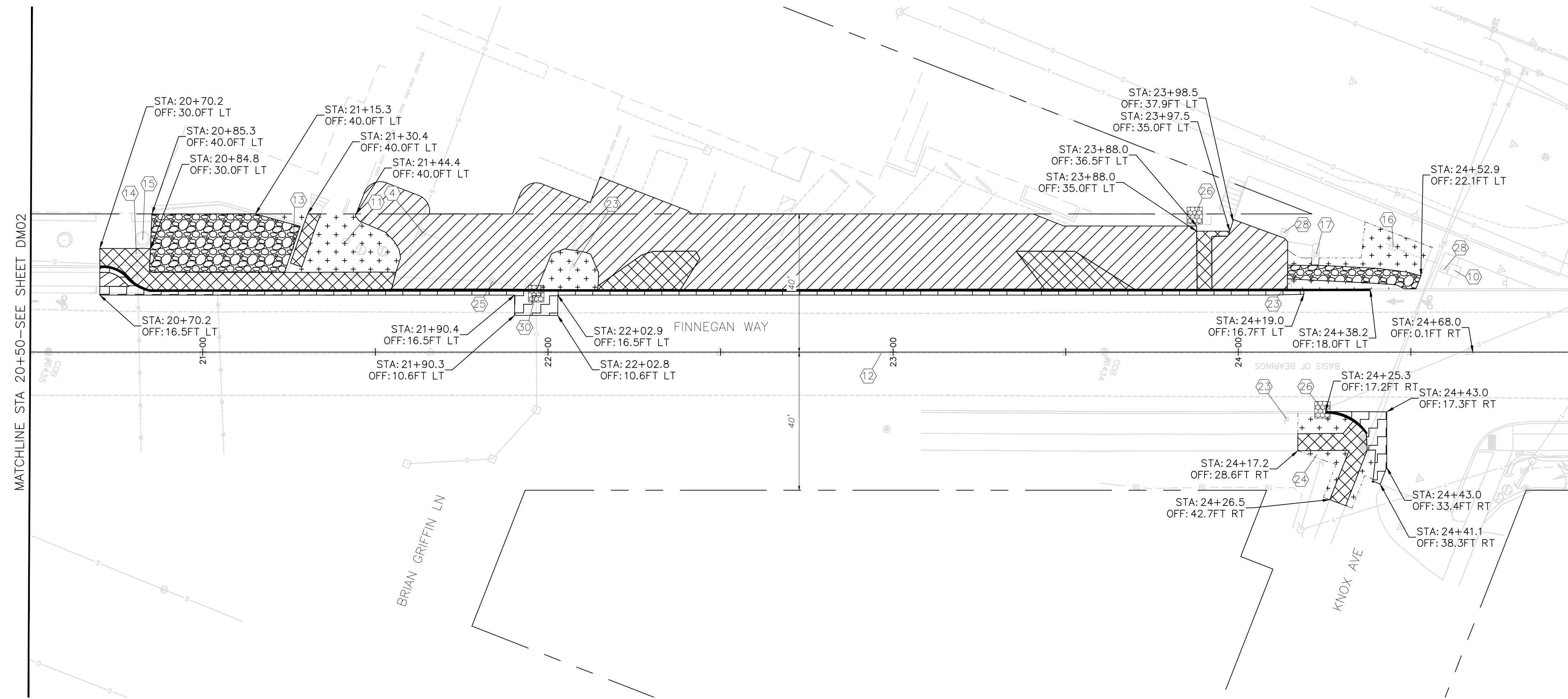
- SEE SHEET DM01 FOR DEMOLITION PLAN NOTES.

DEMOLITION CONSTRUCTION NOTES

- PROTECT EXISTING SEWER MANHOLE & ADJUST TO GRADE.
- PROTECT EXISTING HISTORICAL STRUCTURE.
- PROTECT 4" SANITARY CLEANOUT.
- REMOVE EXISTING CHANNELIZATION. SEE CH01-CH03 FOR DETAILS.
- REMOVE EXISTING TIMBER.
- PROTECT EXISTING WATER METER & ADJUST TO GRADE.
- PROTECT EXISTING TREE.
- PROTECT EXISTING WATER METER.
- PROTECT EXISTING COMMERCIAL SIGN.
- EXISTING SIGN. SEE CH01-CH03 FOR DETAILS.
- PROTECT EXISTING VEGETATION.
- EXISTING STORM STRUCTURE. SEE DRAINAGE PLAN SHEETS DR01-DR03.
- PROTECT EXISTING CATCH BASIN.
- PROTECT EXISTING JUNCTION BOX.
- REMOVE EXISTING STORM STRUCTURE.

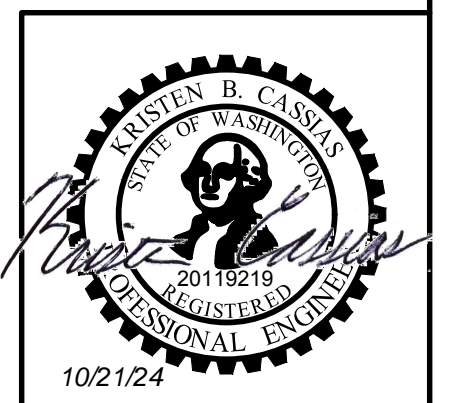
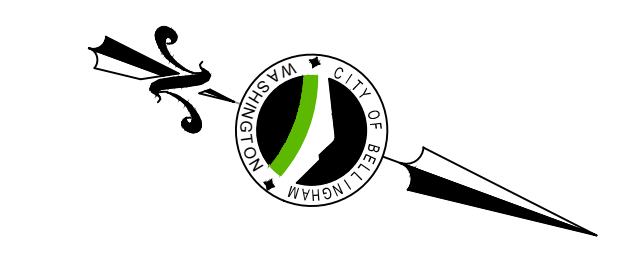
DEMO & TESC LEGEND

- EXISTING ROW 
- SAWCUT LINE 
- CONCRETE CURB REMOVAL 
- CONCRETE REMOVAL 
- CONCRETE ROADWAY REMOVAL 
- ASPHALT REMOVAL 
- GRAVEL REMOVAL 
- CLEAR AND GRUB 
- ASPHALT PLANING 
- CATCH BASIN INSERT (PER COB STD. PLAN EC-620, SHEET ECO2) 



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811 Call 811
two business days
before you dig



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DM03

4			
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Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

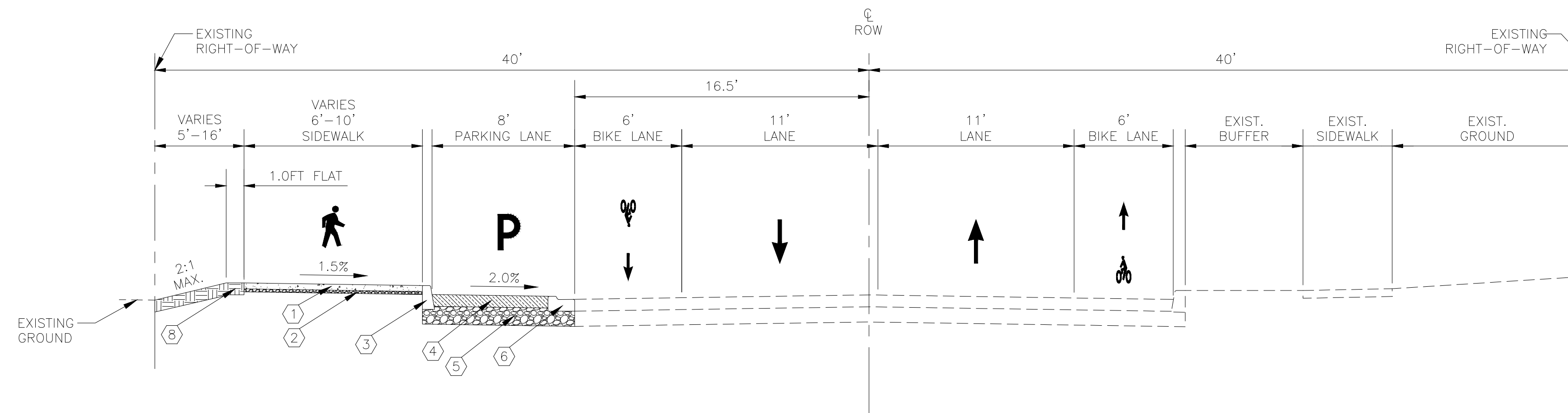
12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DEMOLITION & TESC PLAN

SHEET
17 OF
51

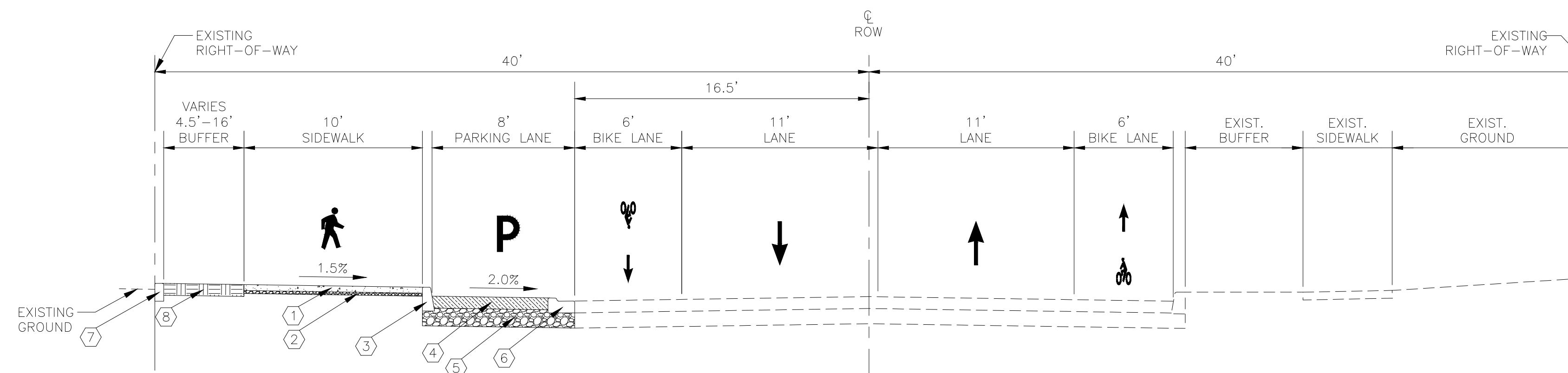
NOTES

1. CONCRETE PAVEMENT WIDTH SHALL BE TO NEAREST JOINT. MATCH DEMOLITION JOINTS.

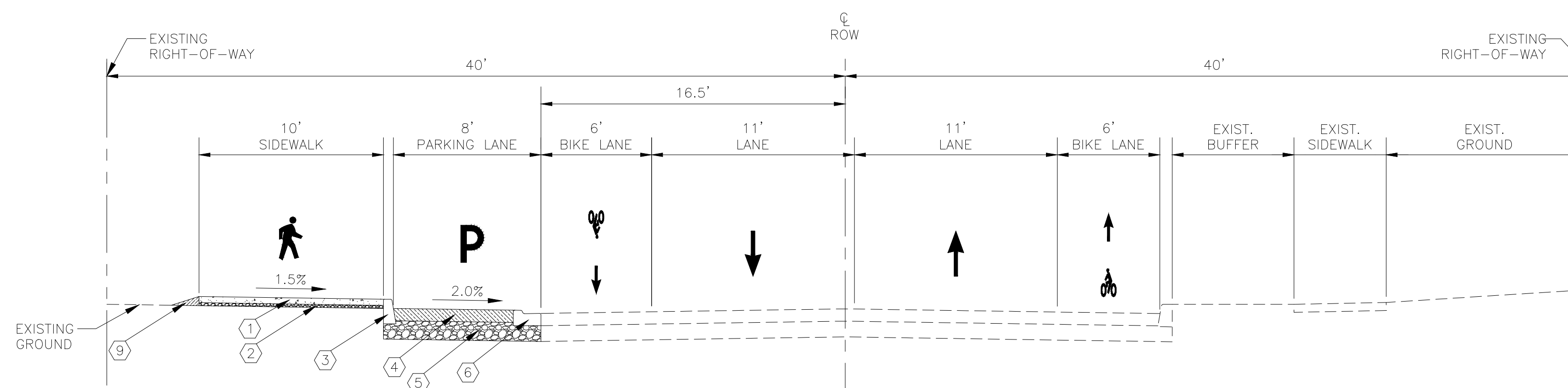
MATERIAL CODE	
#	MATERIAL DESCRIPTION
①	4" CEMENT CONCRETE URBAN VILLAGE SIDEWALK PER COB STD. PLANS CG-230 & CG-232
②	2" OF 3/4" WASHED ROCK PER COB STD. PLAN CG-230
③	TYPE E BARRIER CURB PER COB STD. CG-208
④	10" PCC, CLASS 4000 PSI, PER COB STD. ST-155, SEE NOTE 1
⑤	12" GRAVEL BASE
⑥	CONCRETE GUTTER PER COB STD. ST-155
⑦	CEMENT CONCRETE PEDESTRIAN CURB PER WSDOT STD. PLAN F-10.12-04
⑧	4" OF WOOD CHIP MULCH WITH 6" OF TOPSOIL TYPE C
⑨	ASPHALT CONCRETE RAISED EDGE PER DETAIL SHEET PVD05



TYPICAL SECTION — FINNEGAN WAY
 A STA. 20+70.2 TO STA. 21+44.4
 STA. 23+88.0 TO STA. 24+19.0
 NTS

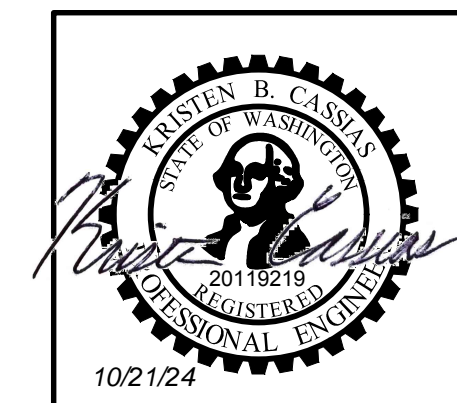


TYPICAL SECTION — FINNEGAN WAY
 B STA. 21+44.4 TO STA. 22+42.9
 STA. 22+55.9 TO STA. 22+97.6
 NTS



TYPICAL SECTION — FINNEGAN WAY
 C STA. 22+42.9 TO STA. 22+55.9
 STA. 22+97.6 TO STA. 23+88.0
 NTS

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RS01

4			
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Date	No	Revision	By

PROJECT ENGINEER KBC
 DESIGNED/DRAWN JK/IN/TK
 INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
 CITY ENGINEER M.L.W.
 ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

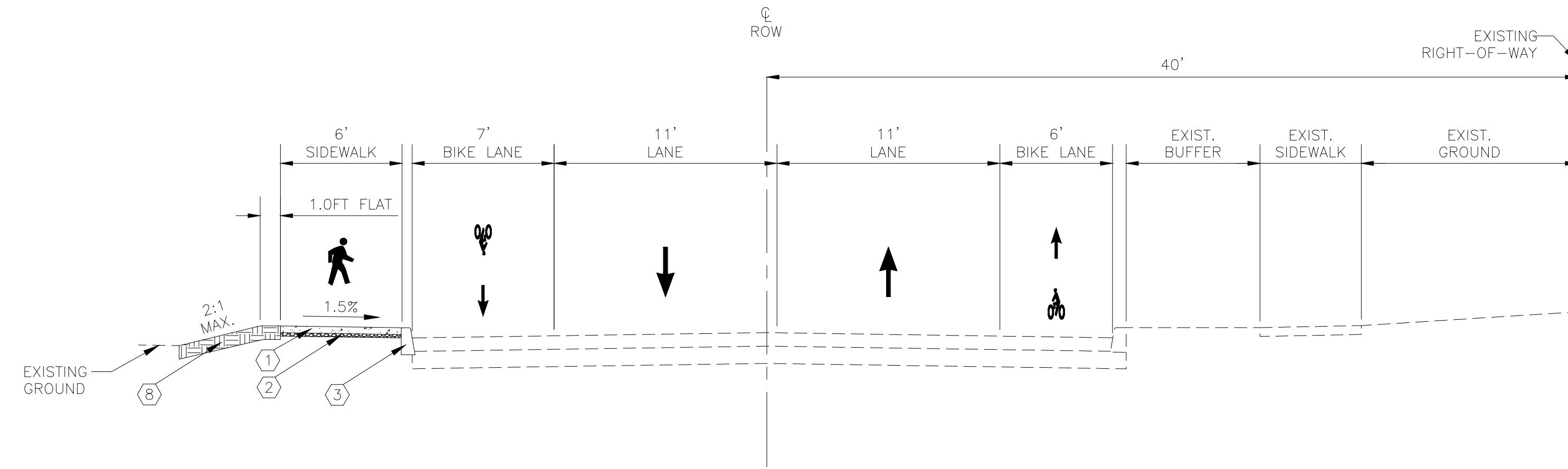
SCALE
 Horiz. AS NOTED
 Vert. AS NOTED

DATUM
 NAD 83/98
 NAVD 88

Job. No. ES566
 Date 8/9/2024
 Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
ROADWAY SECTIONS

SHEET
 18 OF
 51

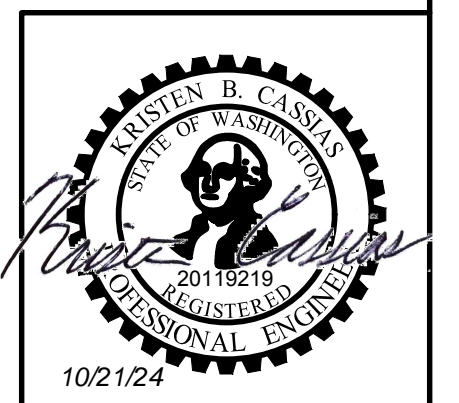


D TYPICAL SECTION — FINNEGAN WAY
 STA. 24+19.0 TO STA. 24+53.8
 NTS

NOTES

1. CONCRETE PAVEMENT WIDTH SHALL BE TO NEAREST JOINT. MATCH DEMOLITION JOINTS.

MATERIAL CODE	
#	MATERIAL DESCRIPTION
①	4" CEMENT CONCRETE URBAN VILLAGE SIDEWALK PER COB STD. PLANS CG-230 & CG-232
②	2" OF 3/4" WASHED ROCK PER COB STD. PLAN CG-230
③	TYPE E BARRIER CURB PER COB STD. CG-208
④	10" PCC, CLASS 4000 PSI, PER COB STD. ST-155, SEE NOTE 1
⑤	12" GRAVEL BASE
⑥	CONCRETE GUTTER PER COB STD. ST-155
⑦	CEMENT CONCRETE PEDESTRIAN CURB PER WSDOT STD. PLAN F-10.12-04
⑧	4" OF WOOD CHIP MULCH WITH 6" OF TOPSOIL TYPE C
⑨	ASPHALT CONCRETE RAISED EDGE PER DETAIL SHEET PVD05



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RS02

4		PROJECT ENGINEER <u>KBC</u>	DIRECTOR PUBLIC WORKS <u>M.A.O.</u>	CITY OF BELLINGHAM, WASHINGTON PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SCALE	DATUM	Job. No. <u>ES566</u>	12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS ROADWAY SECTIONS	SHEET 19 OF 51
3		DESIGNED/DRAWN <u>JK/IN/TK</u>	CITY ENGINEER <u>M.L.W.</u>		Horiz. <u>AS NOTED</u>	NAD 83/98	Date <u>8/9/2024</u>		
2		INSPECTOR	ASSISTANT DIRECTOR <u>M.A.O.</u>		Vert. <u>AS NOTED</u>	NAVD 88	Field Bk. _____		
1									
Date	No	Revision	By						

CONTACT PERSON: KYLE CARLSON, PROJECT ENGINEER AT (360) 778-7946

SEC. 01, T. 37 N., R. 02 E., W.M.

PAVING NOTES

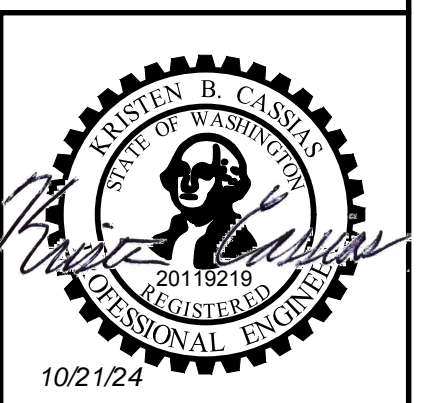
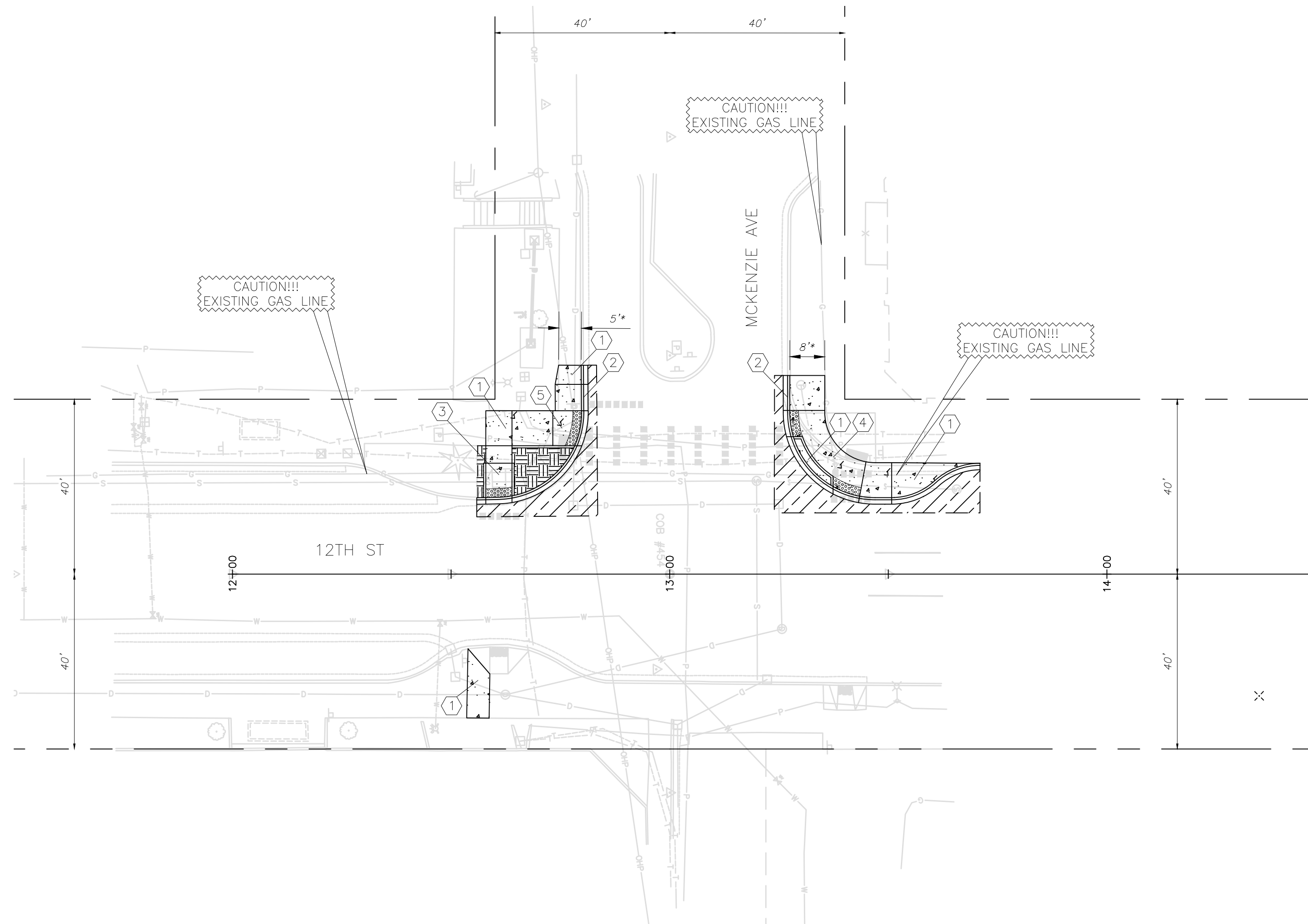
1. CONCRETE PAVEMENT WIDTH SHALL BE TO NEAREST JOINT. MATCH DEMOLITION JOINT.
2. * DENOTES EXISTING FACILITY HORIZONTAL/VERTICAL INFORMATION ACCORDING TO SURVEY & MAY VARY IN THE FIELD.

PAVING CONSTRUCTION NOTES

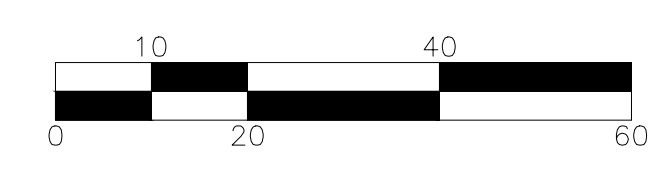
- ① CONSTRUCT CEMENT CONCRETE URBAN VILLAGE SIDEWALK PER COB STD. PLANS CG-230 & CG-232. SEE PAVING DETAIL SHEETS PVD01-PVD05 FOR DETAILS.
- ② CONSTRUCT TYPE A MODIFIED TRAFFIC CURB & GUTTER PER COB STD. PLAN CG-200 & FLOWLINE PROFILE SHEETS FP01-FP04.
- ③ CONSTRUCT PERPENDICULAR CURB RAMP PER WSDOT STD. PLAN F-40.15-04 & PAVING DETAIL SHEETS PVD01-PVD05.
- ④ CONSTRUCT PARALLEL CURB RAMP PER WSDOT STD. PLAN F-40.12-03 & PAVING DETAIL SHEETS PVD01-PVD05.
- ⑤ CONSTRUCT SINGLE DIRECTION CURB RAMP PER WSDOT STD. PLAN F-40.16-03 & PAVING DETAIL SHEETS PVD01-PVD05.

PAVING LEGEND

EXISTING ROW	
CONCRETE SIDEWALK	
CONCRETE DRIVEWAY	
ASPHALT DRIVEWAY	
CONCRETE ROADWAY	
ASPHALT ROADWAY	
SOD RESTORATION W/6" TOPSOIL TYPE A	
MULCH W/6" TOPSOIL TYPE A	
DETECTABLE WARNING SURFACE	
ASPHALT OVERLAY	



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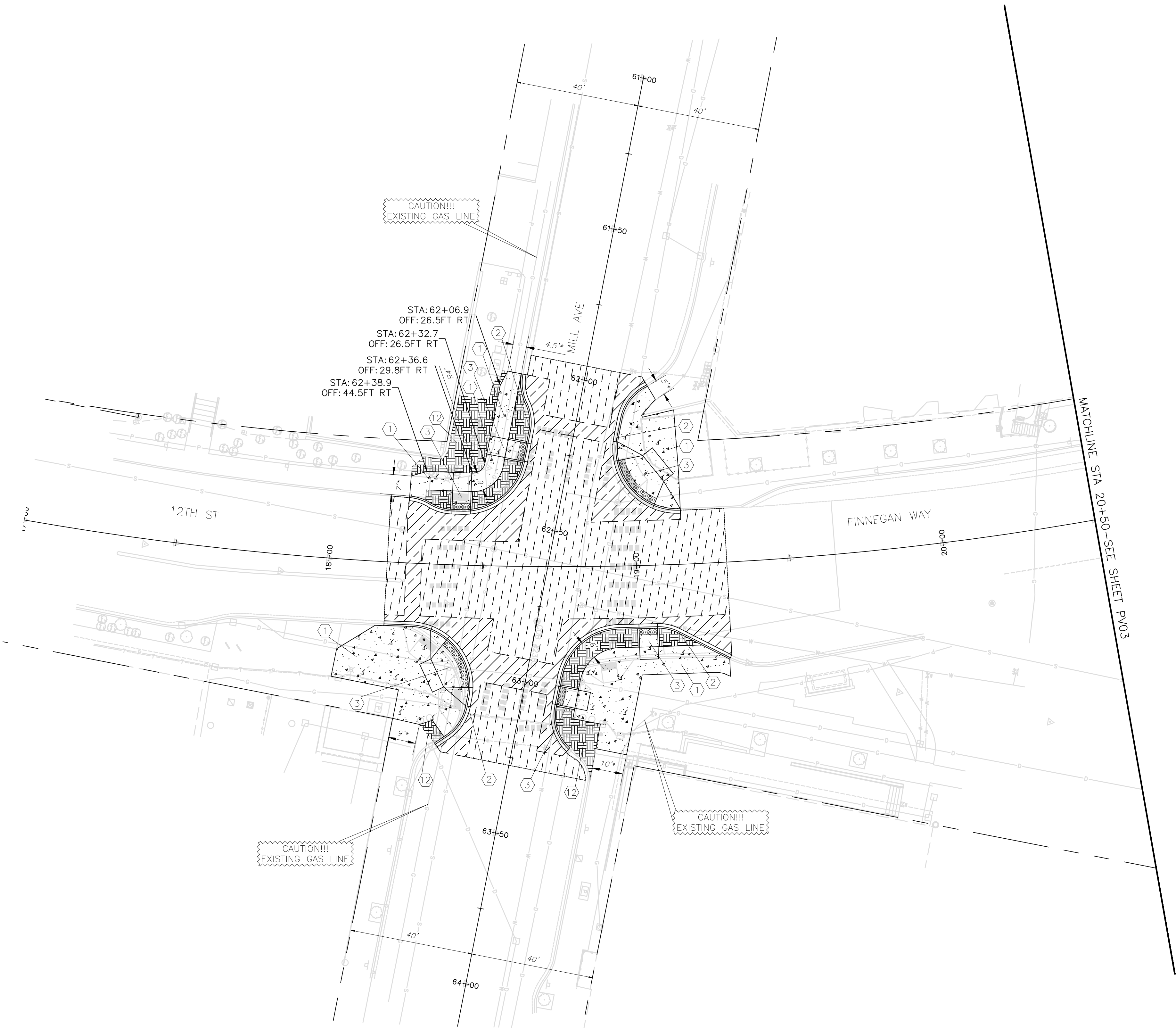
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PV01

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4																		
3																		
2																		
1																		
Date	No																	

SEC. 01, T. 37 N., R. 02 E., W.M.



PAVING NOTES

- 1. SEE SHEET PV01 FOR PAVING PLAN NOTES.

PAVING CONSTRUCTION NOTES

- ① CONSTRUCT CEMENT CONCRETE URBAN VILLAGE SIDEWALK PER COB STD. PLANS CG-230 & CG-232. SEE PAVING DETAIL SHEETS PVD01-PVD05 FOR DETAILS.
- ② CONSTRUCT TYPE A MODIFIED TRAFFIC CURB & GUTTER PER COB STD. PLAN CG-200 & FLOWLINE PROFILE SHEETS FP01-FP04.
- ③ CONSTRUCT PERPENDICULAR CURB RAMP PER WSDOT STD. PLAN F-40.15-04 & PAVING DETAIL SHEETS PVD01-PVD05.
- ⑫ RESTORE DECORATIVE PLANTING IN KIND.

PAVING LEGEND

EXISTING ROW	
CONCRETE SIDEWALK	
CONCRETE DRIVEWAY	
ASPHALT DRIVEWAY	
CONCRETE ROADWAY	
ASPHALT ROADWAY	
SOD RESTORATION W/6" TOPSOIL TYPE A	
MULCH W/6" TOPSOIL TYPE A	
DETECTABLE WARNING SURFACE	
ASPHALT OVERLAY	

ASPHALT RESTORATION

4" HMA 3/8", PG 64-22
14" GRAVEL BASE

ASPHALT OVERLAY

2" PLANING
2" HMA 3/8", PG 64-22



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PV02

4			
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2			
1			
Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
PAVING PLAN - 12TH ST & MILL AVE

SHEET
21 OF
51

SEC. 01, T. 37 N., R. 02 E., W.M.

PAVING NOTES

- SEE SHEET PV01 FOR PAVING PLAN NOTES.

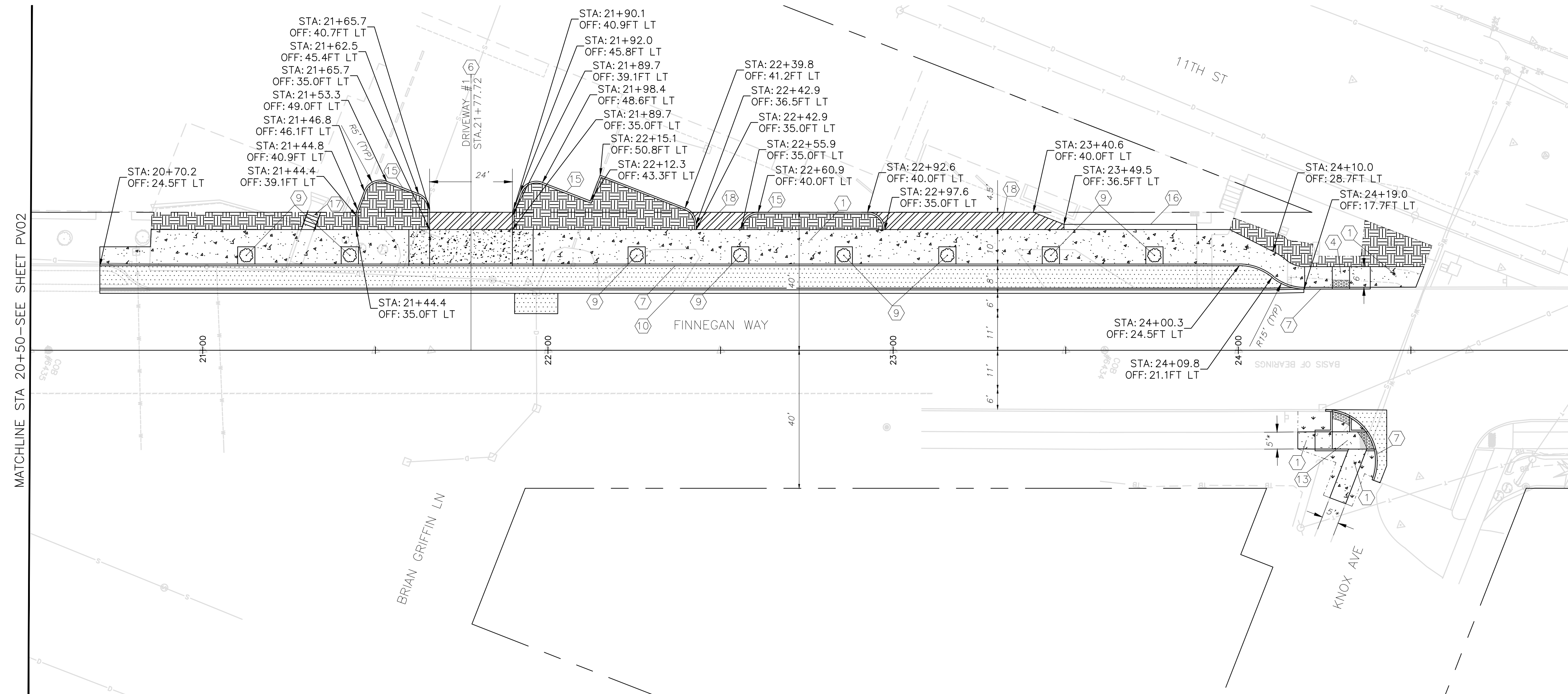
PAVING CONSTRUCTION NOTES

- CONSTRUCT CEMENT CONCRETE URBAN VILLAGE SIDEWALK PER COB STD. PLANS CG-230 & CG-232. SEE PAVING DETAIL SHEETS PVD01-PVD05 FOR DETAILS.
- CONSTRUCT PARALLEL CURB RAMP PER WSDOT STD. PLAN F-40.12-03 & PAVING DETAIL SHEETS PVD01-PVD05.
- CONSTRUCT DRIVEWAY PER COB STD. PLAN CG-260, TYPE 2. SEE DRIVEWAY PROFILE SHEET DWP01.
- CONSTRUCT CEMENT CONCRETE TRAFFIC CURB PER COB STD. PLAN CG-208.
- PLANT AMUR MAPLE IN 5FT X 5FT TREE WELL PER COB STD. PLAN ST-184.
- CONSTRUCT CONCRETE GUTTER PER COB STD. PLAN ST-155 & FLOWLINE PROFILE SHEETS FP01-FP04.
- CONSTRUCT COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03 & PAVING DETAIL SHEETS PVD01-PVD05.
- CONSTRUCT CEMENT CONCRETE PEDESTRIAN CURB PER WSDOT STANDARD PLAN F-10.12-04.
- CONSTRUCT ASPHALT RAISED EDGE PER DETAIL SHEET PVD05.
- CONSTRUCT STAIRS WITH HANDRAIL. SEE PAVING DETAIL SHEET PVD03.
- PROVIDE 1:12 SLOPED ASPHALT TIE-DOWN TO PARKING LOT. LIMITS SHOWN ARE APPROXIMATE.

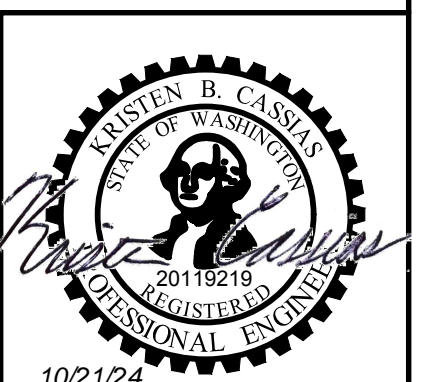
PAVING LEGEND

EXISTING ROW	
CONCRETE SIDEWALK	
CONCRETE DRIVEWAY	
ASPHALT DRIVEWAY	
CONCRETE ROADWAY	
ASPHALT ROADWAY	
SOD RESTORATION W/6" TOPSOIL TYPE A	
MULCH W/6" TOPSOIL TYPE A	
DETECTABLE WARNING SURFACE	
ASPHALT OVERLAY	

ASPHALT DRIVEWAY TIE-DOWN
 4" MIN. HMA 3/8", PG 64-22
 4" CRUSHED SURFACING TOP COURSE



MATCHLINE STA 20+50-SEE SHEET PV02

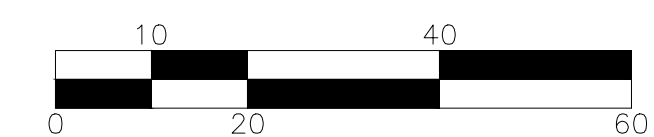
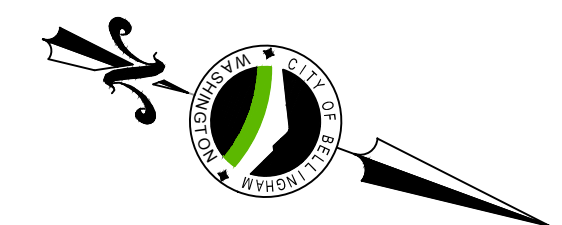


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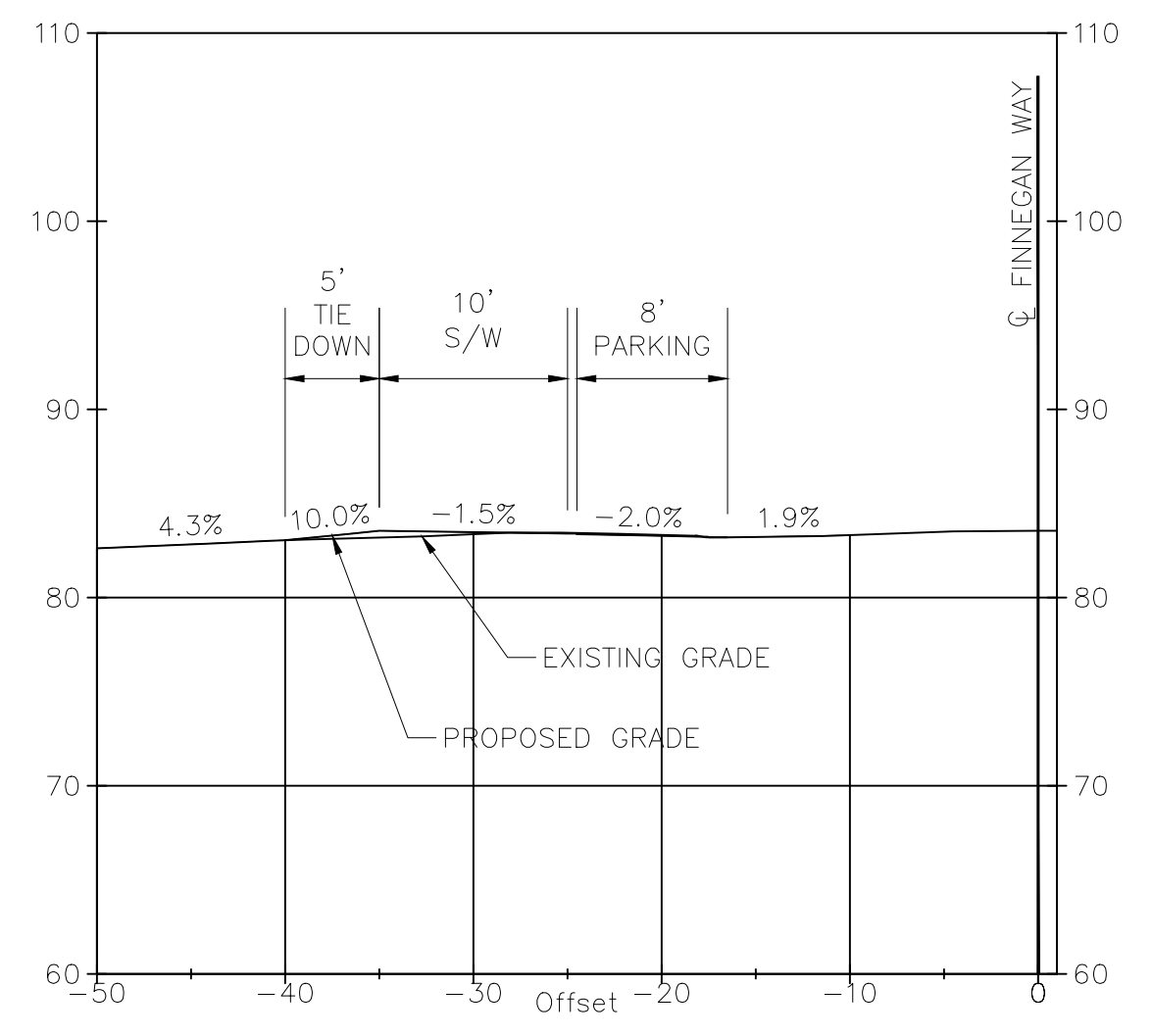
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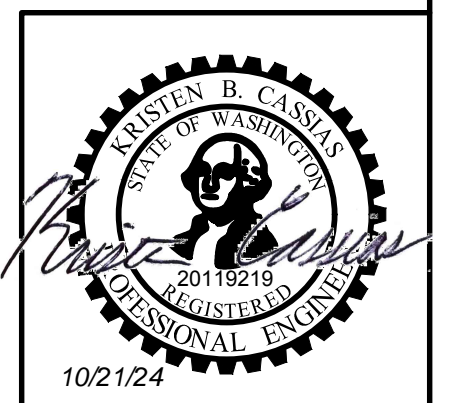
PV03

4		PROJECT ENGINEER_KBC	DIRECTOR PUBLIC WORKS_M.A.O.	CITY OF BELLINGHAM, WASHINGTON PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SCALE	DATUM	Job. No. ES566	12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS PAVING PLAN - FINNEGAN WAY	SHEET 22 OF 51
3		DESIGNED/DRAWN_JK/IN/TK	CITY ENGINEER_M.L.W.		Horiz. AS NOTED	NAD 83/98	Date 8/9/2024		
2		INSPECTOR	ASSISTANT DIRECTOR_M.A.O.		Vert. AS NOTED	NAVD 88	Field Bk.		
1									
Date	No	Revision	By						

CONTACT PERSON: KYLE CARLSON, PROJECT ENGINEER AT (360) 778-7946

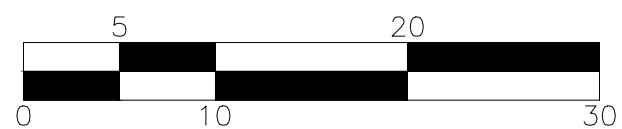


DRIVEWAY #1
STA. 21+77.72



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Date	No	Revision	By
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	1		

PROJECT ENGINEER KBC
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INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

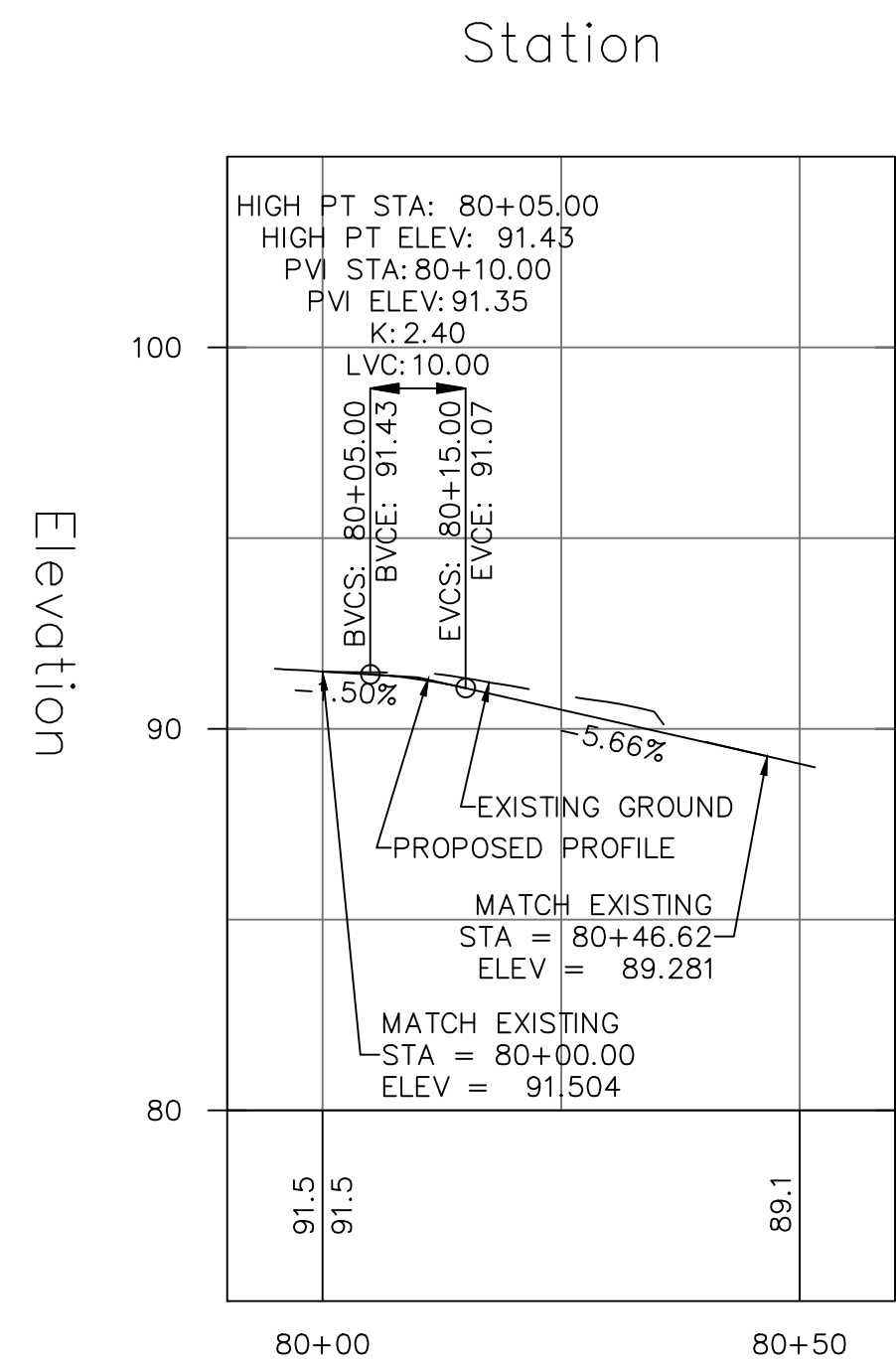
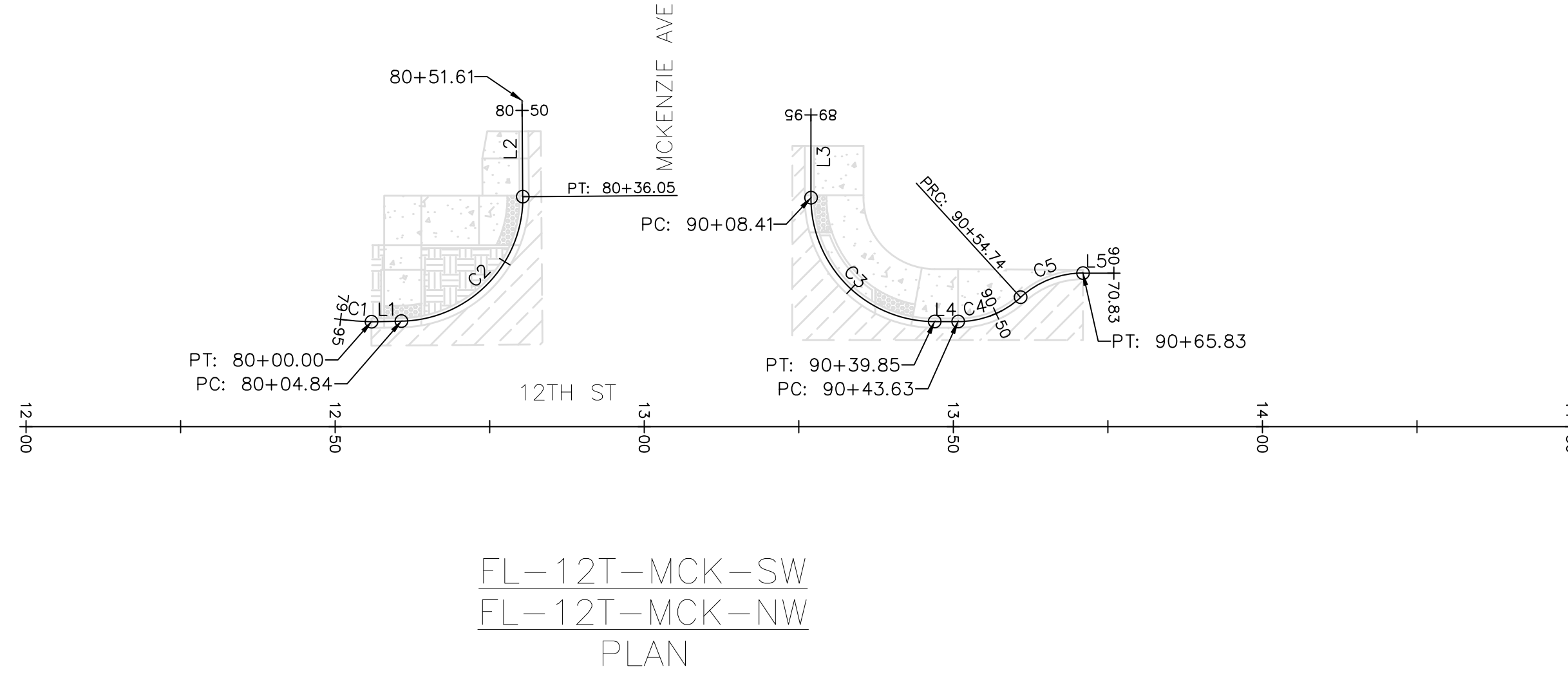
Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DRIVEWAY PROFILES

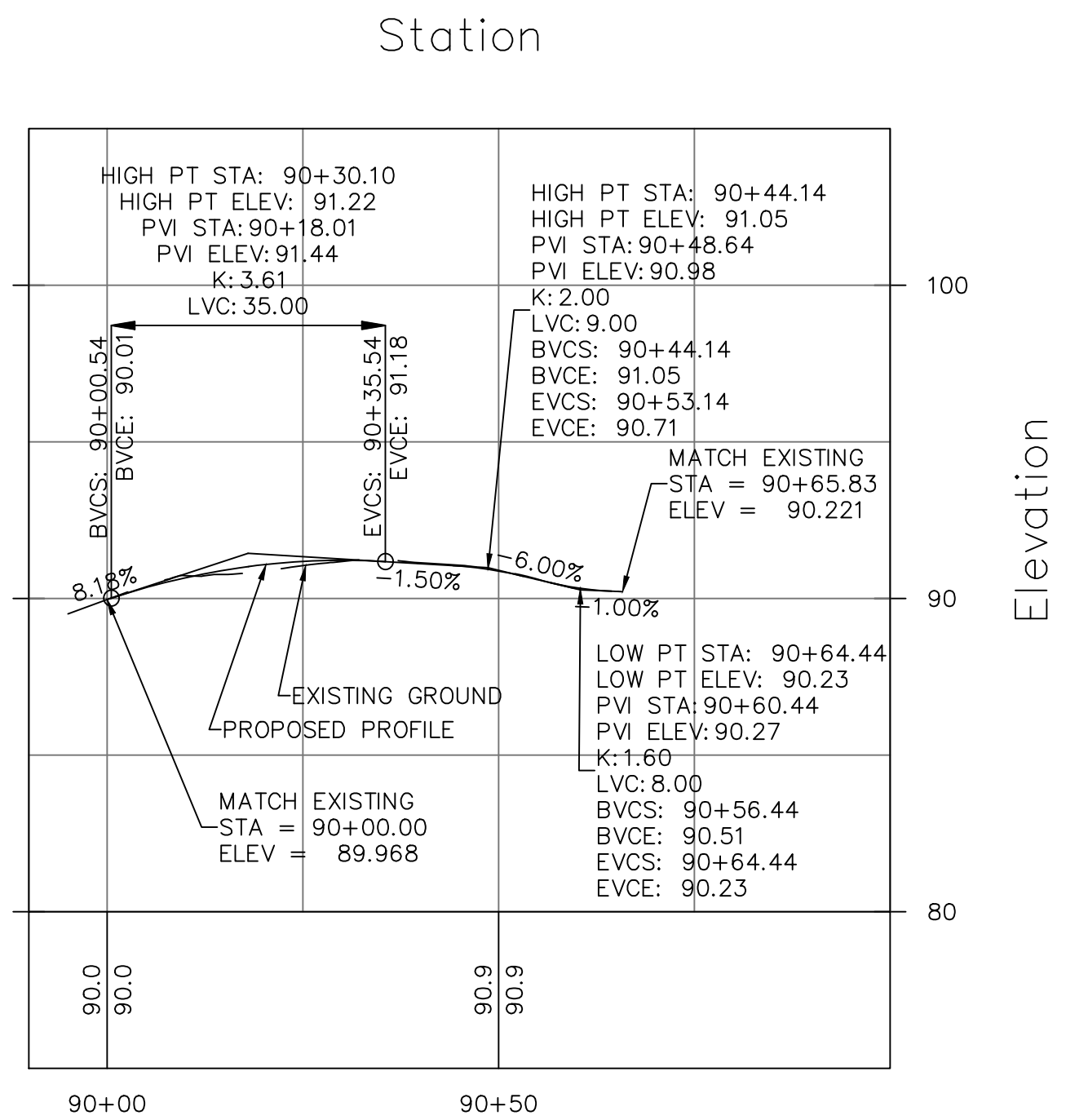
SHEET
23 OF
51

FL-12T-MCK-SW							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
C1	58.38	5.00	N5° 34' 10.51"E	79+95.00	N: 631506.54, E: 1237545.11	80+00.00	N: 631511.52, E: 1237545.60
L1	NA	4.84	N0° 09' 31.69"E	80+00.00	N: 631511.52, E: 1237545.60	80+04.84	N: 631516.35, E: 1237545.61
C2	20.00	31.22	N44° 33' 19.09"W	80+04.84	N: 631516.35, E: 1237545.61	80+36.05	N: 631536.41, E: 1237525.87
L2	NA	15.56	N89° 16' 09.87"W	80+36.05	N: 631536.41, E: 1237525.87	80+51.61	N: 631536.60, E: 1237510.31

FL-12T-MCK-NW							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L3	NA	13.41	S88° 46' 30.11"E	89+95.00	N: 631583.29, E: 1237513.61	90+08.41	N: 631583.00, E: 1237527.02
C3	20.00	31.43	N46° 12' 00.48"E	90+08.41	N: 631583.00, E: 1237527.02	90+39.85	N: 631602.59, E: 1237547.44
L4	NA	3.79	N1° 10' 31.06"E	90+39.85	N: 631602.59, E: 1237547.44	90+43.63	N: 631606.38, E: 1237547.52
C4	15.00	11.10	N20° 01' 38.84"W	90+43.63	N: 631606.38, E: 1237547.52	90+54.74	N: 631616.57, E: 1237543.80
C5	15.00	11.10	N20° 02' 20.80"W	90+54.74	N: 631616.57, E: 1237543.80	90+65.83	N: 631626.76, E: 1237540.09
L5	NA	5.00	N1° 10' 31.06"E	90+65.83	N: 631626.76, E: 1237540.09	90+70.83	N: 631631.76, E: 1237540.19



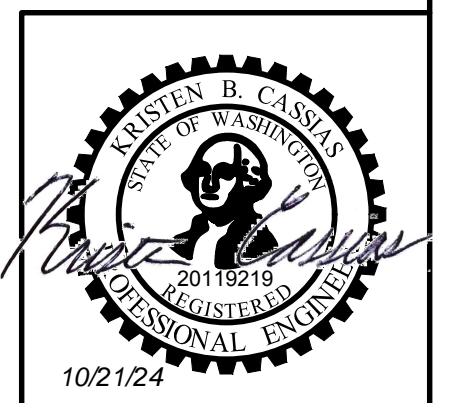
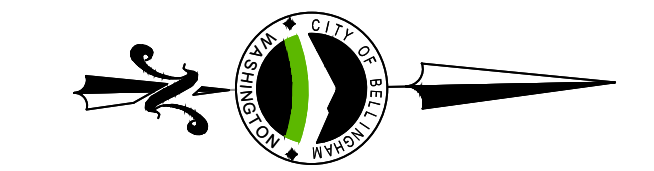
HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'



HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'

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Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

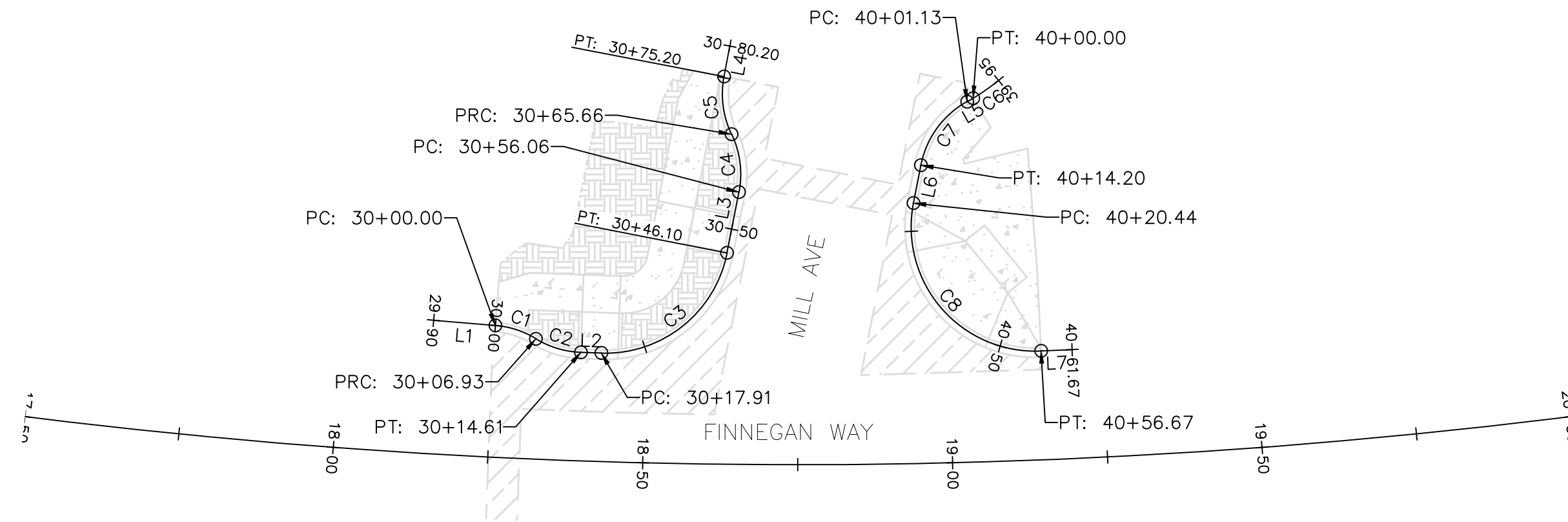
Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
FLOWLINE PROFILES

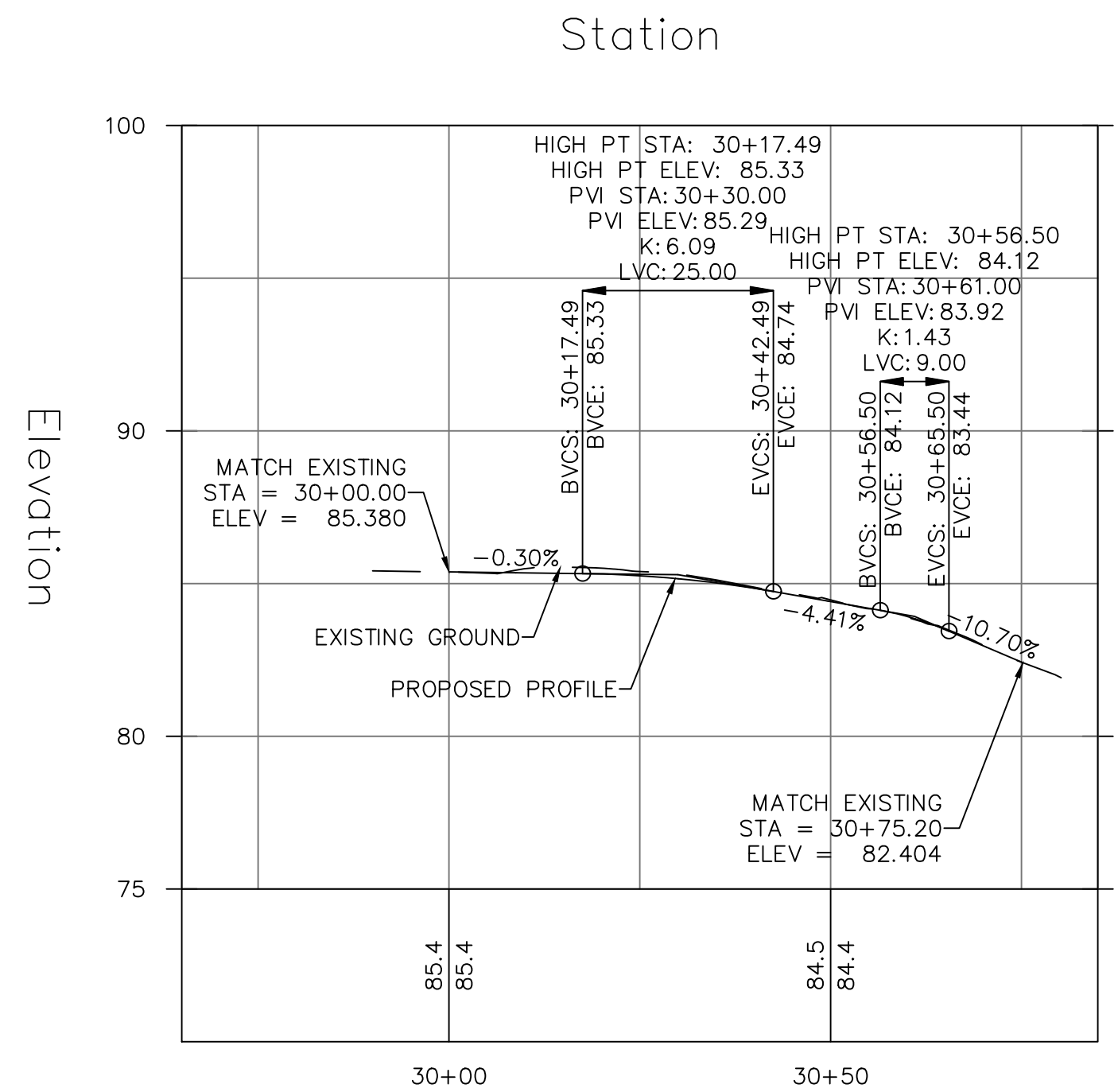
SHEET
24 OF
51

FL-FIN-MIL-SW							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L1	NA	10.00	N5° 02' 14.37"W	29+90.00	N: 632067.47, E: 1237543.74	30+00.00	N: 632077.43, E: 1237542.86
C1	15.00	6.93	N8° 12' 01.78"E	30+00.00	N: 632077.43, E: 1237542.86	30+06.93	N: 632084.23, E: 1237543.84
C2	15.00	7.68	N6° 46' 40.37"E	30+06.93	N: 632084.23, E: 1237543.84	30+14.61	N: 632091.77, E: 1237544.74
L2	NA	3.30	N7° 58' 41.64"W	30+14.61	N: 632091.77, E: 1237544.74	30+17.91	N: 632095.04, E: 1237544.28
C3	20.00	28.19	N48° 27' 22.98"W	30+17.91	N: 632095.04, E: 1237544.28	30+46.10	N: 632112.23, E: 1237524.89
L3	NA	9.96	N88° 50' 19.85"W	30+46.10	N: 632112.23, E: 1237524.89	30+56.06	N: 632112.43, E: 1237514.92
C4	15.00	9.59	S72° 50' 17.41"W	30+56.06	N: 632112.43, E: 1237514.92	30+65.66	N: 632109.65, E: 1237505.91
C5	15.00	9.54	S72° 44' 39.47"W	30+65.66	N: 632109.65, E: 1237505.91	30+75.20	N: 632106.86, E: 1237496.95
L4	NA	5.00	N89° 05' 24.37"W	30+75.20	N: 632106.86, E: 1237496.95	30+80.20	N: 632106.94, E: 1237491.95

FL-FIN-MIL-NW							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
C6	34.48	5.00	S44° 56' 30.72"E	39+95.00	N: 632150.60, E: 1237489.95	40+00.00	N: 632147.07, E: 1237493.48
L5	NA	1.13	S39° 51' 04.22"E	40+00.00	N: 632147.07, E: 1237493.48	40+01.13	N: 632146.20, E: 1237494.20
C7	15.00	13.07	S63° 52' 35.58"E	40+01.13	N: 632146.20, E: 1237494.20	40+14.20	N: 632140.63, E: 1237505.57
L6	NA	6.24	S88° 50' 19.85"E	40+14.20	N: 632140.63, E: 1237505.57	40+20.44	N: 632140.50, E: 1237511.81
C8	20.00	36.24	N39° 15' 28.54"E	40+20.44	N: 632140.50, E: 1237511.81	40+56.67	N: 632164.87, E: 1237531.73
L7	NA	5.00	N12° 19' 39.83"W	40+56.67	N: 632164.87, E: 1237531.73	40+61.67	N: 632169.76, E: 1237530.66

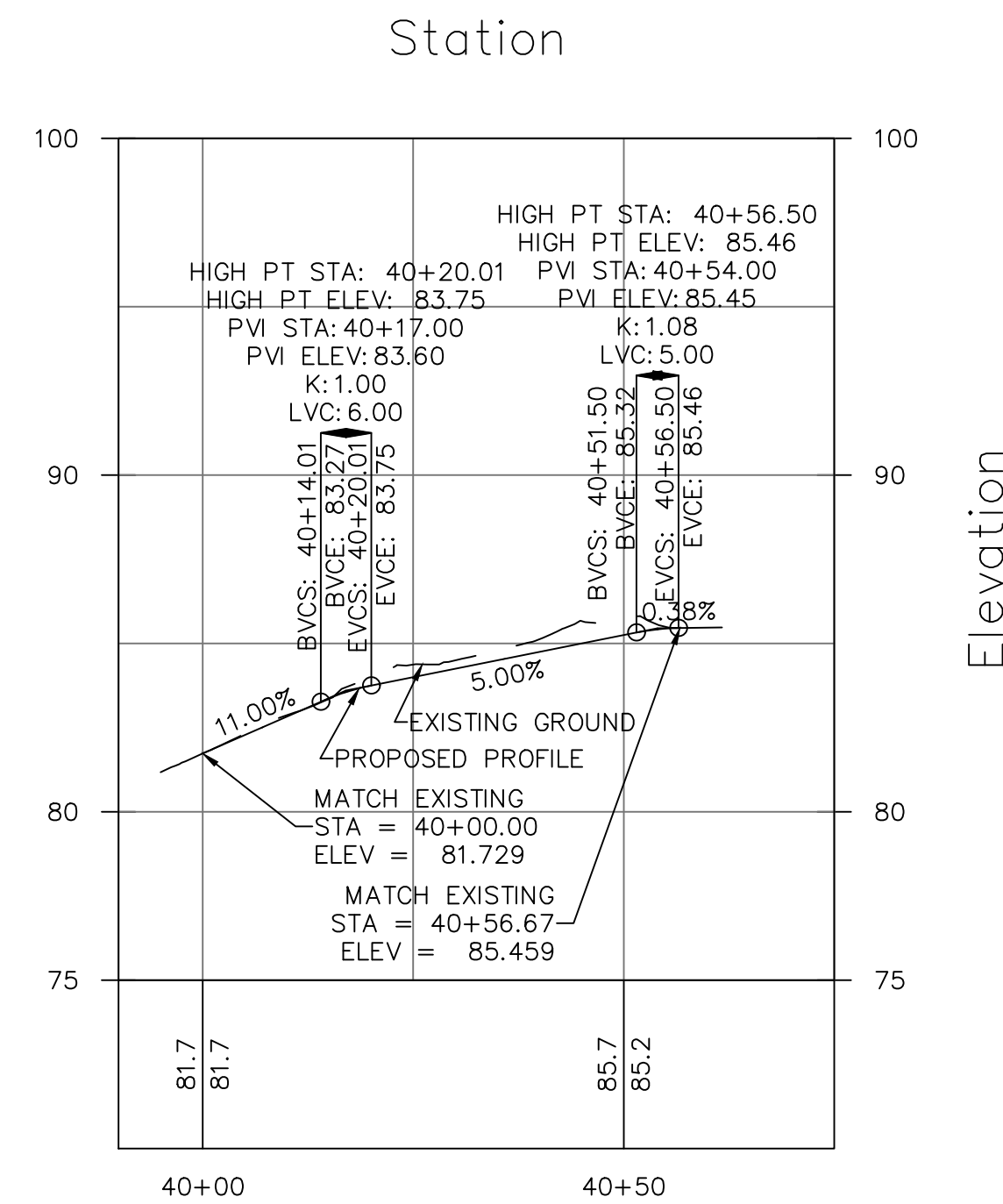


FL-FIN-MIL-SW
FL-FIN-MIL-NW
PLAN



FL-FIN-MIL-SW
PROFILE

HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'

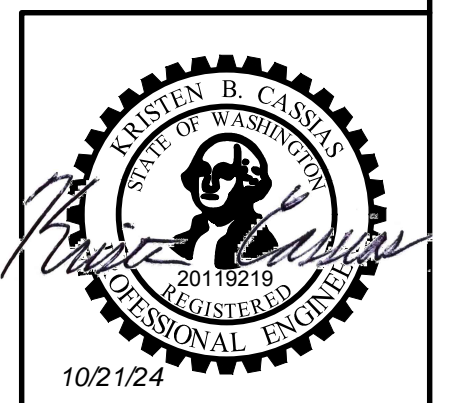
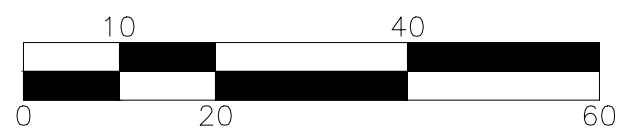


FL-FIN-MIL-NW
PROFILE

HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'

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FP02

4			
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Date	No	Revision	By

PROJECT ENGINEER KBC
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INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

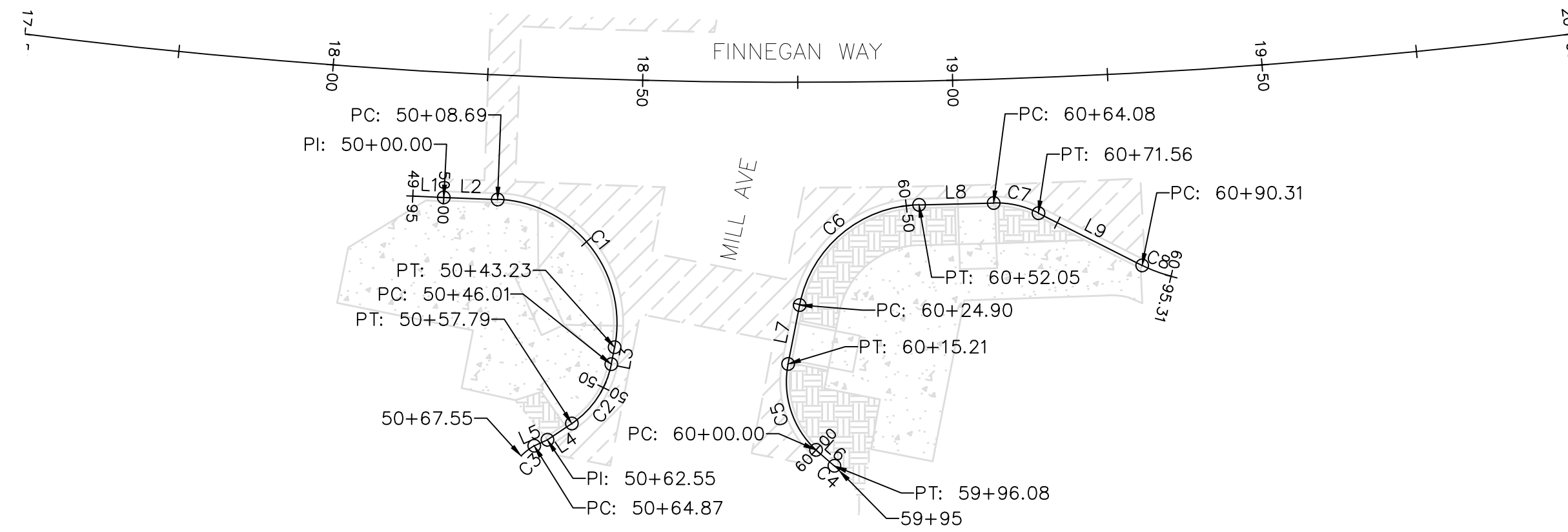
Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
FLOWLINE PROFILES

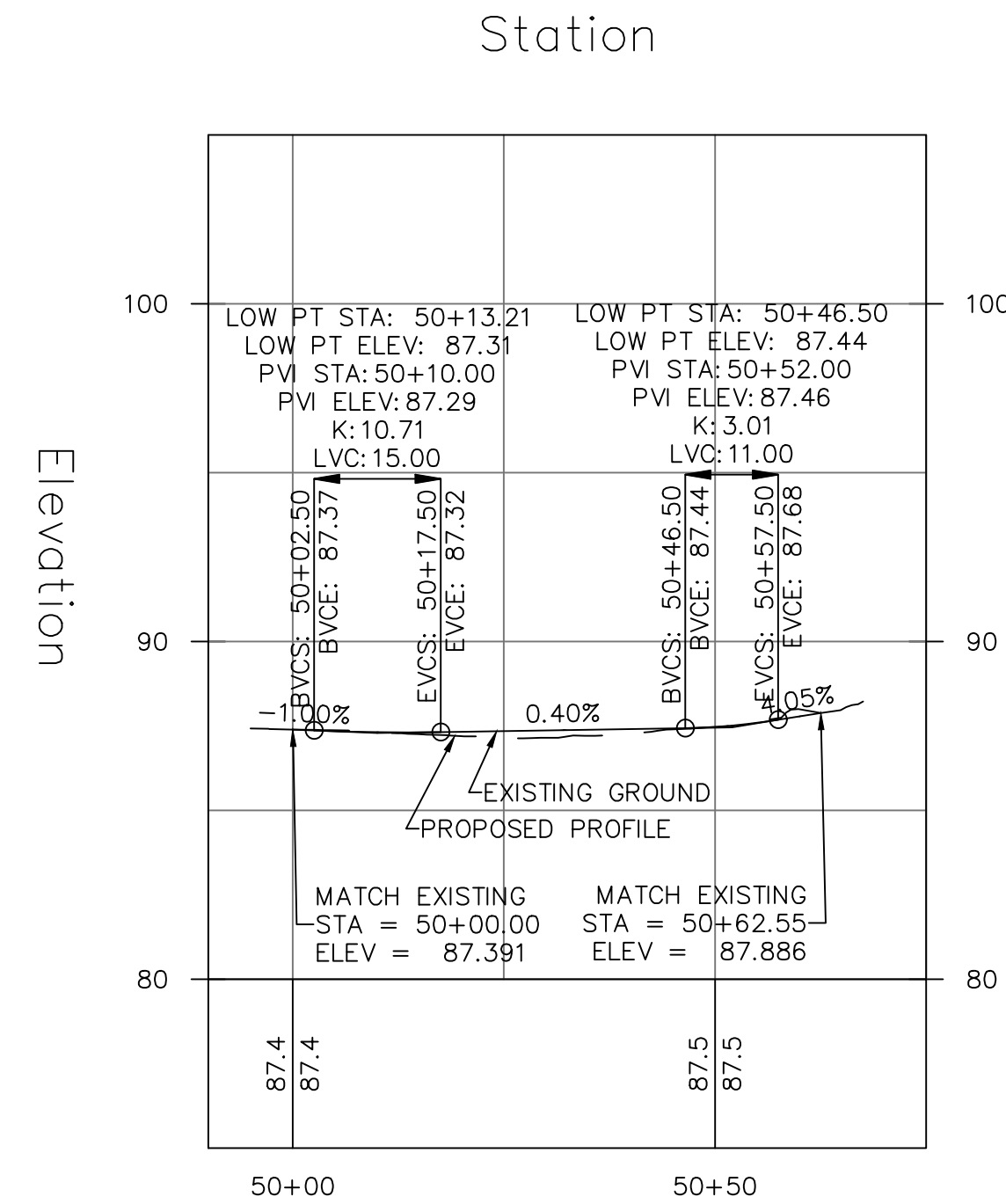
SHEET
25 OF
51

FL-FIN-MIL-SE							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L1	NA	5.00	N7° 17' 17.79"W	49+95.00	N: 632071.34, E: 1237585.35	50+00.00	N: 632076.30, E: 1237584.71
L2	NA	8.69	N7° 44' 10.61"W	50+00.00	N: 632076.30, E: 1237584.71	50+08.69	N: 632084.91, E: 1237583.54
C1	20.00	34.54	N41° 44' 18.02"E	50+08.69	N: 632084.91, E: 1237583.54	50+43.23	N: 632107.60, E: 1237603.78
L3	NA	2.78	S88° 47' 13.35"E	50+43.23	N: 632107.60, E: 1237603.78	50+46.01	N: 632107.54, E: 1237606.56
C2	15.00	11.78	S66° 17' 13.35"E	50+46.01	N: 632107.54, E: 1237606.56	50+57.79	N: 632102.93, E: 1237617.07
L4	NA	4.76	S43° 47' 13.35"E	50+57.79	N: 632102.93, E: 1237617.07	50+62.55	N: 632099.49, E: 1237620.37
L5	NA	2.32	S33° 50' 26.72"E	50+62.55	N: 632099.49, E: 1237620.37	50+64.87	N: 632097.56, E: 1237621.66
C3	9.83	2.68	S47° 38' 35.03"E	50+64.87	N: 632097.56, E: 1237621.66	50+67.55	N: 632095.76, E: 1237623.63

FL-FIN-MIL-NE							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
C4	9.26	1.08	S32° 45' 07.67"W	59+95.00	N: 632146.72, E: 1237617.11	59+96.08	N: 632145.81, E: 1237616.52
L6	NA	3.92	S31° 14' 27.56"W	59+96.08	N: 632145.81, E: 1237616.52	60+00.00	N: 632142.46, E: 1237614.49
C5	15.00	15.21	S62° 09' 30.20"W	60+00.00	N: 632142.46, E: 1237614.49	60+15.21	N: 632135.65, E: 1237601.61
L7	NA	9.68	N88° 47' 13.35"W	60+15.21	N: 632135.65, E: 1237601.61	60+24.90	N: 632135.86, E: 1237591.93
C6	20.00	27.15	N49° 53' 46.55"W	60+24.90	N: 632135.86, E: 1237591.93	60+52.05	N: 632152.04, E: 1237572.72
L8	NA	12.03	N11° 20' 29.66"W	60+52.05	N: 632152.04, E: 1237572.72	60+64.08	N: 632163.83, E: 1237570.35
C7	15.00	7.48	N2° 36' 56.88"E	60+64.08	N: 632163.83, E: 1237570.35	60+71.56	N: 632171.23, E: 1237570.69
L9	NA	18.75	N16° 54' 33.34"E	60+71.56	N: 632171.23, E: 1237570.69	60+90.31	N: 632189.17, E: 1237576.14
C8	23.30	5.00	N10° 26' 54.26"E	60+90.31	N: 632189.17, E: 1237576.14	60+95.31	N: 632194.08, E: 1237577.05

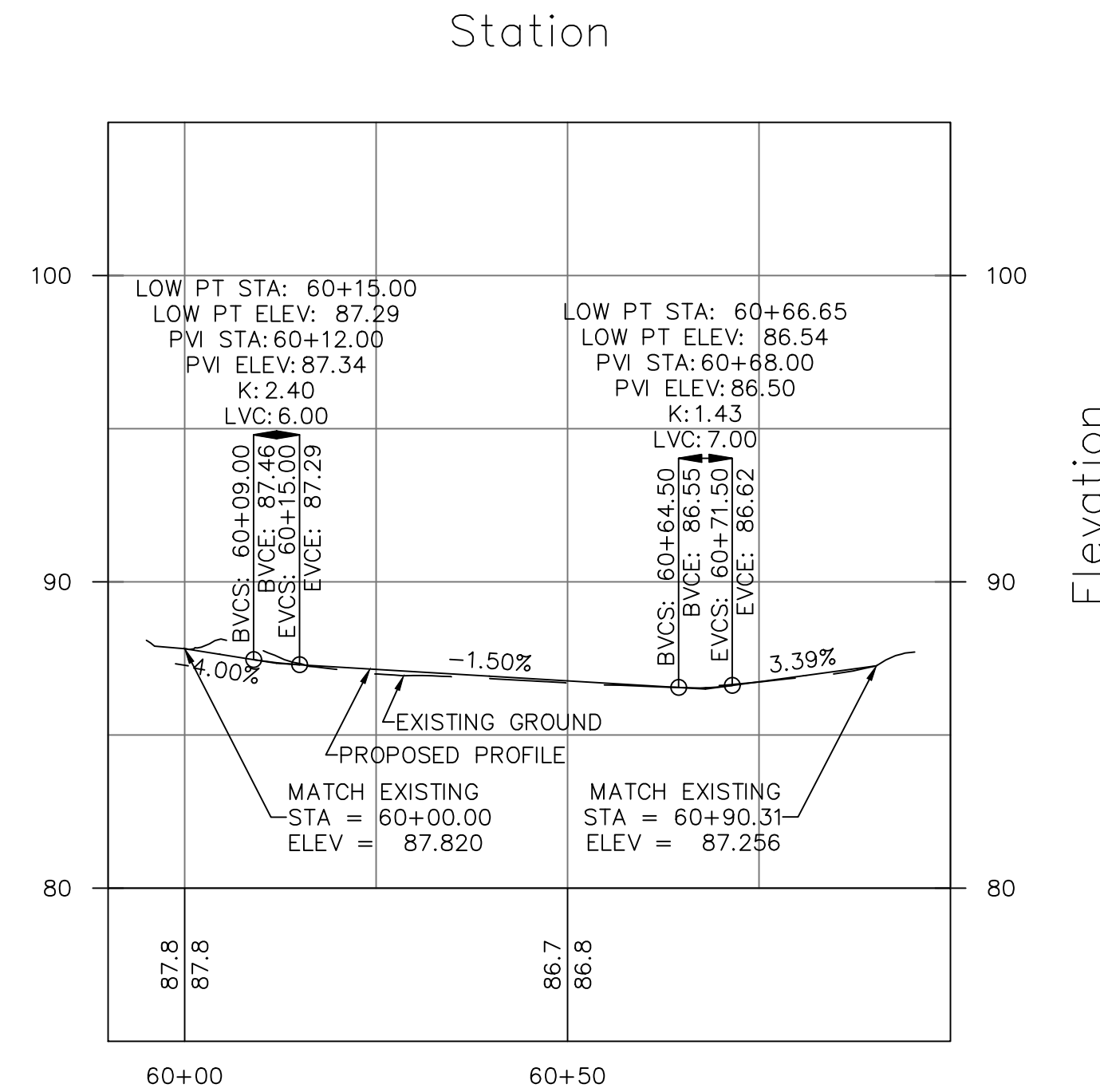


FL-FIN-MIL-SE
FL-FIN-MIL-NE
PLAN



FL-FIN-MIL-SE
PROFILE

HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'

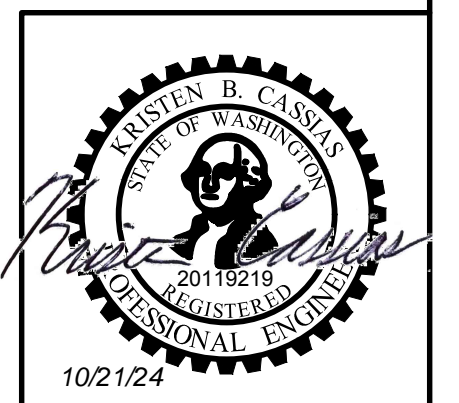
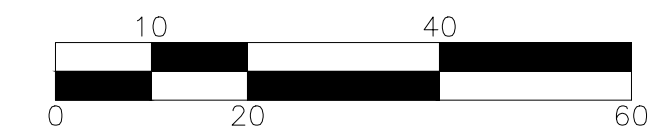
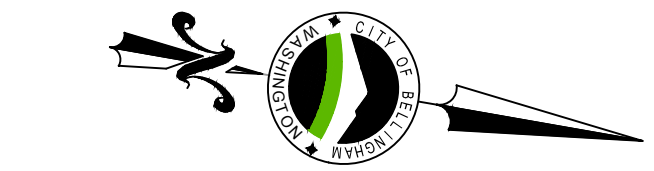


FL-FIN-MIL-NE
PROFILE

HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'

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FP03

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

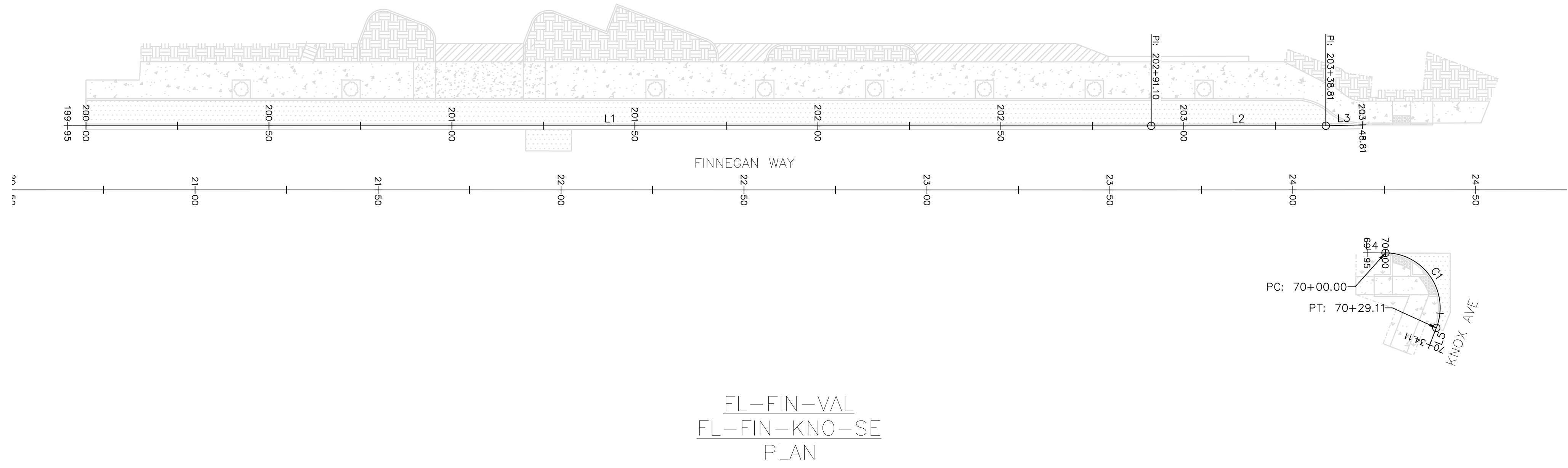
Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
FLOWLINE PROFILES

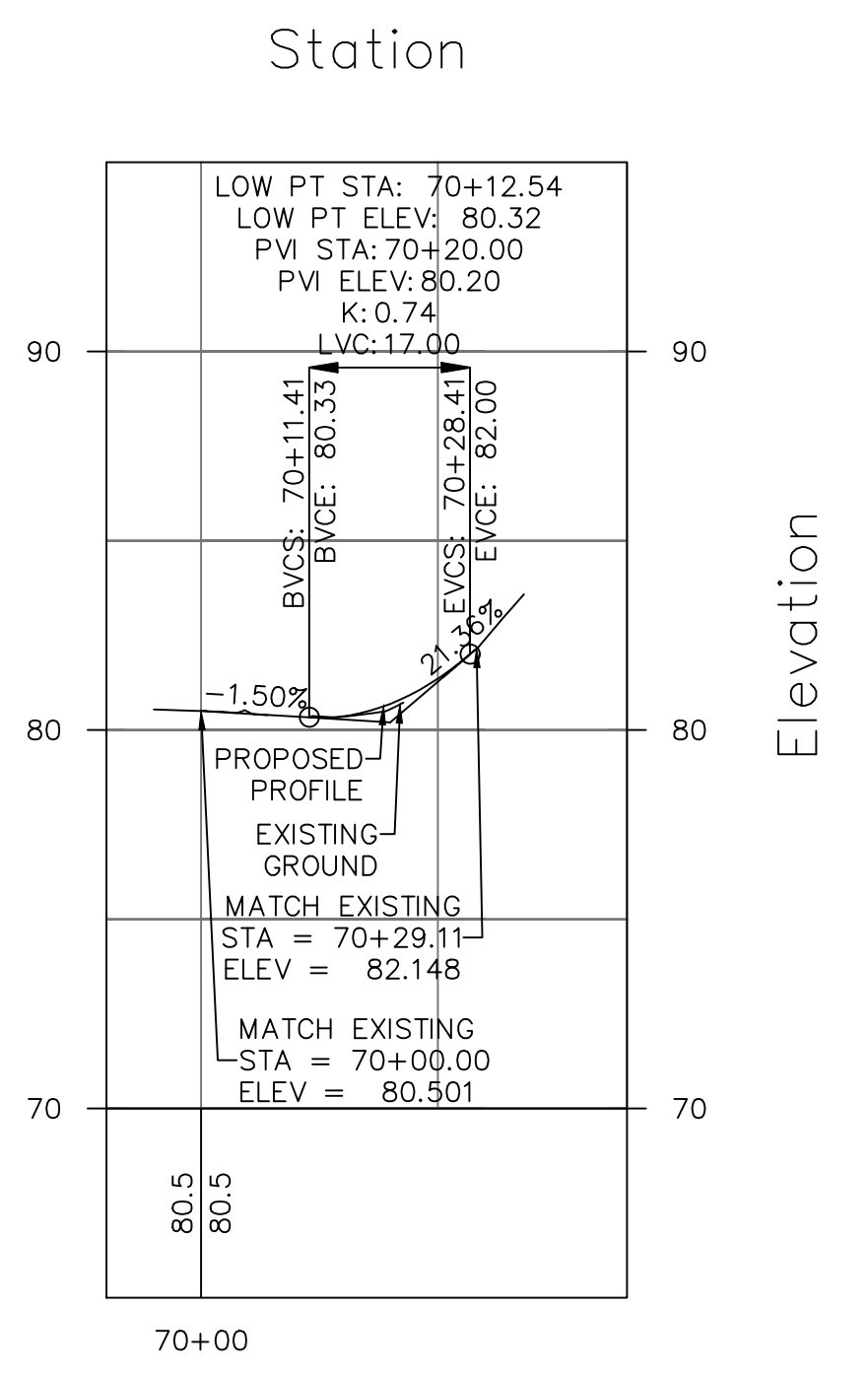
SHEET
26 OF
51

FL-FIN-VAL							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L1	NA	296.10	N20° 11' 11.82"W	199+95.00	N: 632306.46, E: 1237489.98	202+91.10	N: 632584.37, E: 1237387.80
L2	NA	47.71	N20° 11' 53.00"W	202+91.10	N: 632584.37, E: 1237387.80	203+38.81	N: 632629.15, E: 1237371.33
L3	NA	10.00	N21° 36' 58.39"W	203+38.81	N: 632629.15, E: 1237371.33	203+48.81	N: 632638.45, E: 1237367.64

FL-FIN-KNO-SE							
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	BEGIN STATION	BEGIN N/E	END STATION	END N/E
L4	NA	5.00	N19° 59' 50.59"W	69+95.00	N: 632651.72, E: 1237399.99	70+00.00	N: 632656.42, E: 1237398.28
C1	15.00	29.11	N35° 35' 58.40"E	70+00.00	N: 632656.42, E: 1237398.28	70+29.11	N: 632676.54, E: 1237412.69
L5	NA	5.00	S88° 48' 12.60"E	70+29.11	N: 632676.54, E: 1237412.69	70+34.11	N: 632676.44, E: 1237417.69

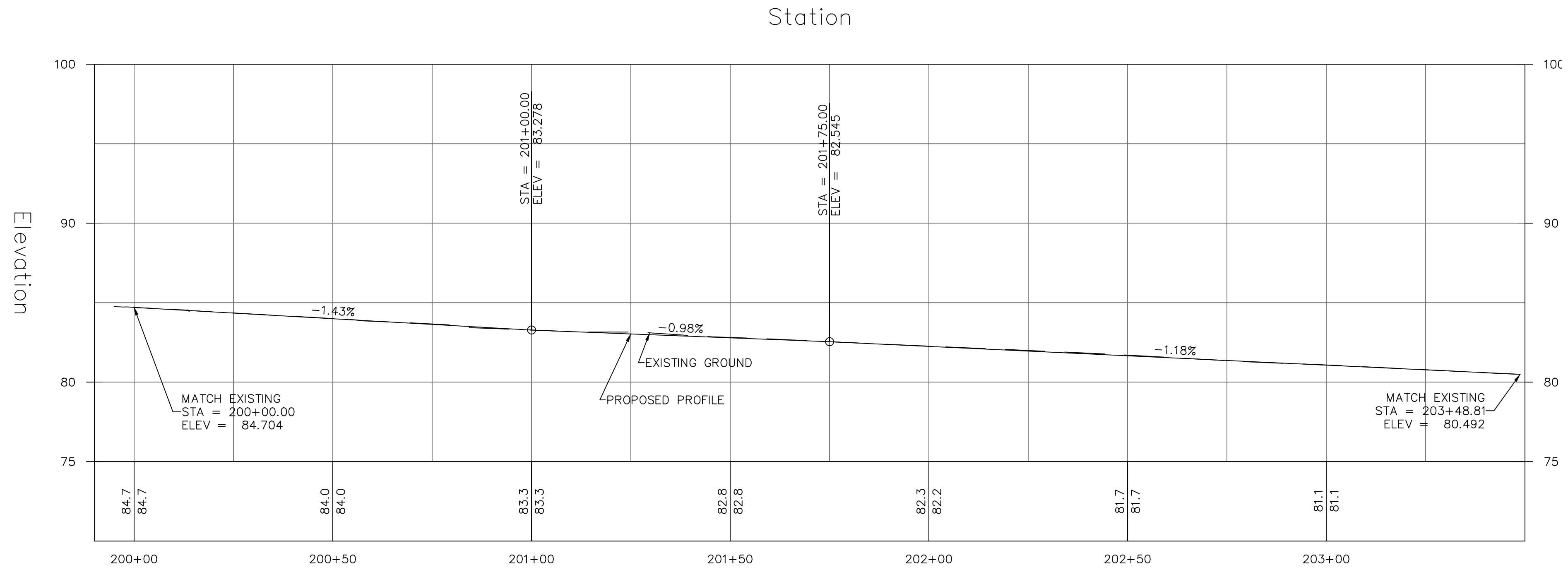


FL-FIN-VAL
FL-FIN-KNO-SE
PLAN



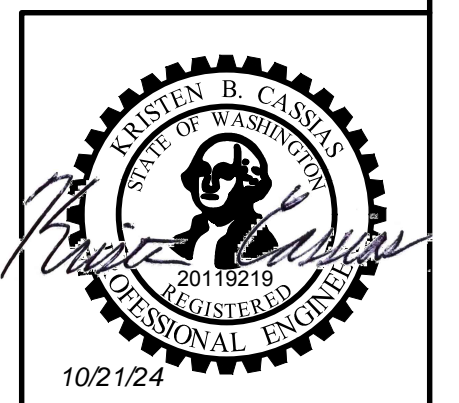
FL-FIN-KNO-SE
PROFILE

HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'

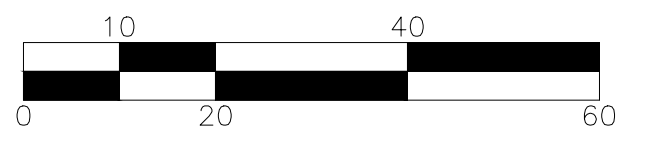
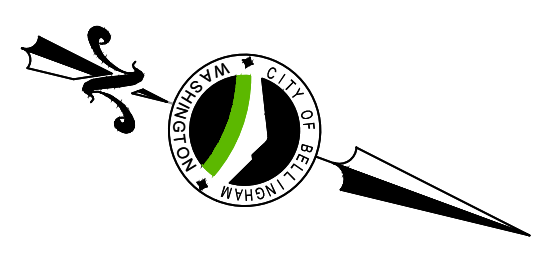


FL-FIN-VAL
PROFILE

HORIZONTAL SCALE - 1" = 20'
VERTICAL SCALE - 1" = 5'



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FP04

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

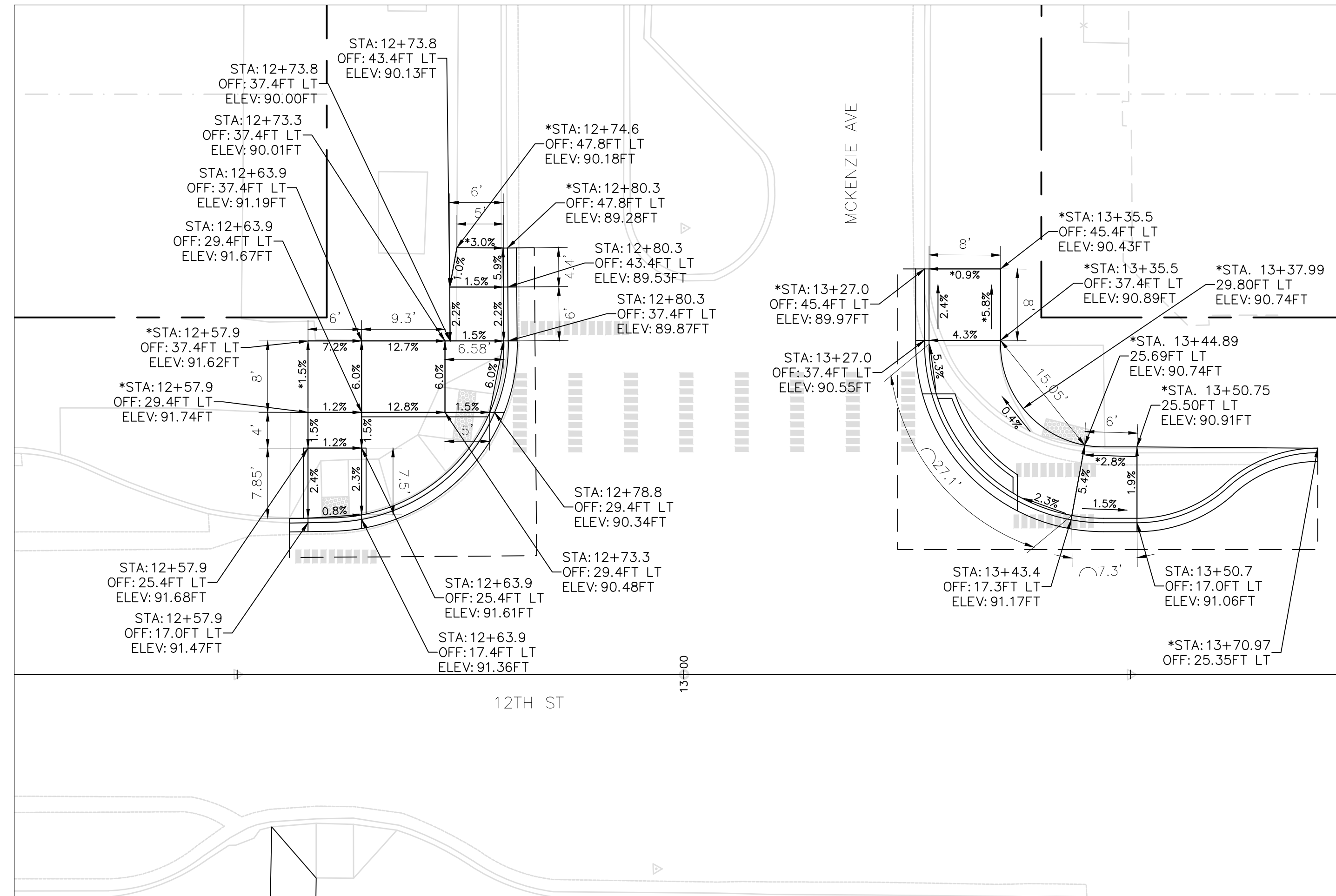
Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
FLOWLINE PROFILES

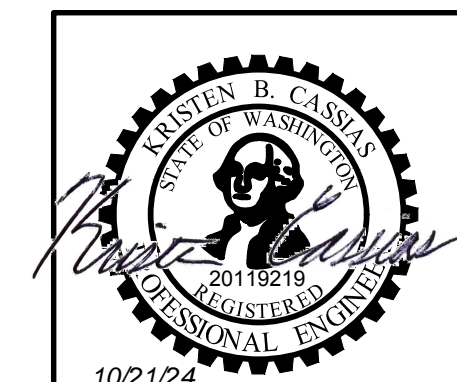
SHEET
27 OF
51

CURB RAMP NOTES

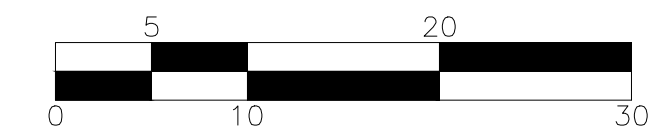
1. FIELD STAKE FINAL CURB, GUTTER, SIDEWALK, & CURB RAMP LOCATIONS TO BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. THE LOCATIONS & ELEVATIONS SHOWN ON THIS PLAN ARE APPROXIMATE & SUBJECT TO MINOR ADJUSTMENT BY THE ENGINEER TO ACHIEVE ADA-COMPLIANT CURB RAMP DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CURB RAMP THAT CANNOT BE CONSTRUCTED TO FULL COMPLIANCE PRIOR TO PLACING CONCRETE. ANY WORK THAT IS COMPLETE THAT IS NON-COMPLIANT SHALL BE REMOVED & REPLACED AT THE CONTRACTOR'S EXPENSE. COMPLIANCE OF CURB RAMP SLOPES SHALL BE MEASURED WITH A 2FT MAXIMUM LENGTH LEVEL.
2. REMOVE CURB, GUTTER, & SIDEWALK TO NEAREST EXPANSION JOINT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. ROADWAY RESTORATION AT NEW CURBS SHALL MAINTAIN POSITIVE DRAINAGE. CONTRACTOR TO VERIFY EXISTING SLOPES IN THE FIELD PRIOR TO REMOVAL OF EXISTING ROADWAY SURFACE.
4. ELEVATIONS ARE PROVIDED AT FLOWLINES. TOP OF CURB SHOULD BE +0.5FT WHERE FULL HEIGHT CURB IS IDENTIFIED ON THE PAVING PLANS.
5. * DENOTES EXISTING FACILITY HORIZONTAL/VERTICAL INFORMATION ACCORDING TO SURVEY & MAY VARY IN THE FIELD.



CURB RAMP DETAIL
12TH ST & MCKENZIE AVE



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12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
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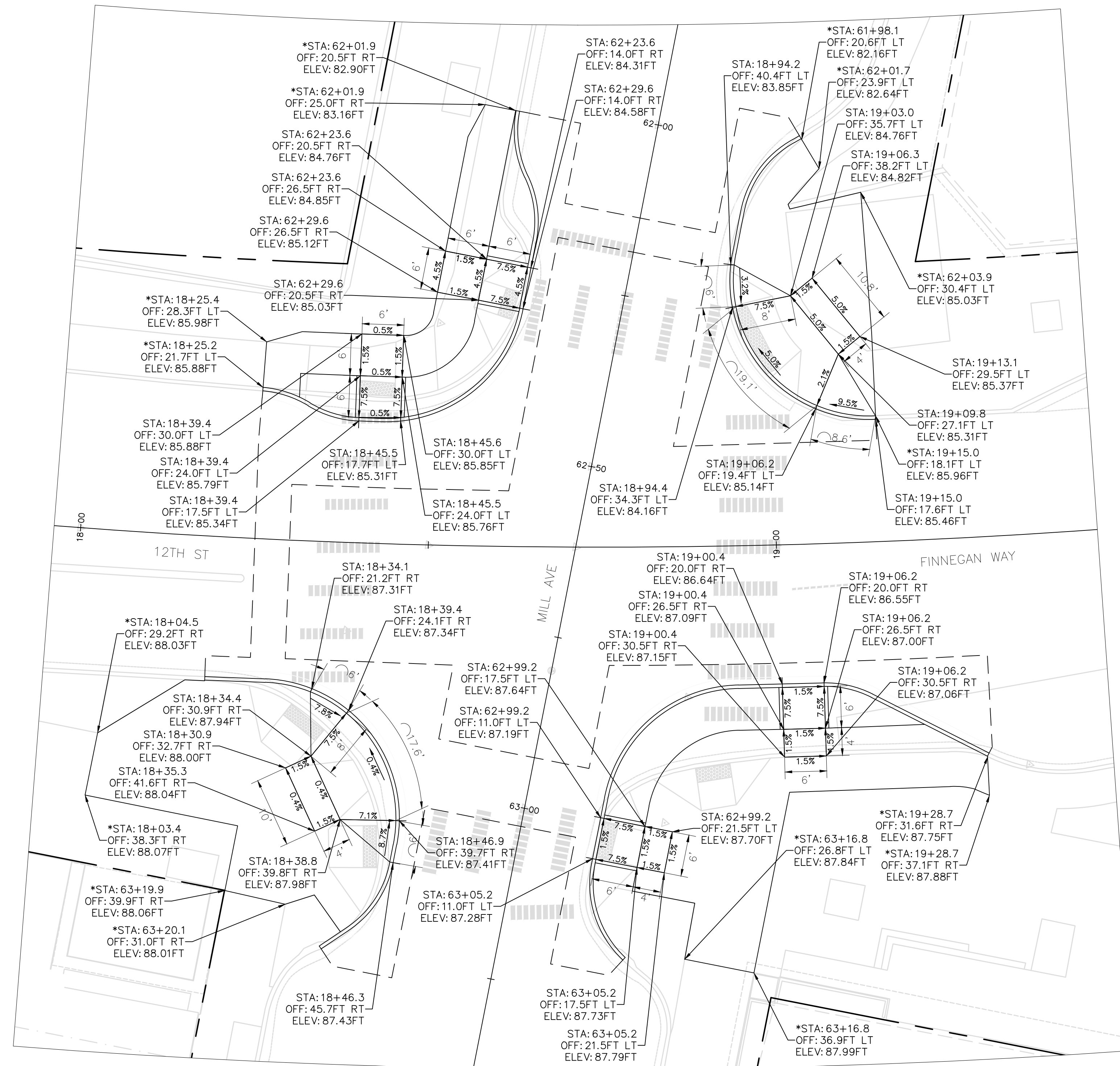
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PVD01

4				PROJECT ENGINEER_KBC	DIRECTOR PUBLIC WORKS_M.A.O.	CITY OF BELLINGHAM, WASHINGTON PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SCALE	DATUM	Job. No. ES566	12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS PAVING DETAILS	SHEET 28 OF 51
3			DESIGNED/DRAWN_JK/IN/TK	CITY ENGINEER_M.L.W.	Horiz. AS NOTED		NAD 83/98	Date 8/9/2024			
2			INSPECTOR	ASSISTANT DIRECTOR_M.A.O.	Vert. AS NOTED		NAVD 88	Field Bk.			
1											
Date	No	Revision	By								

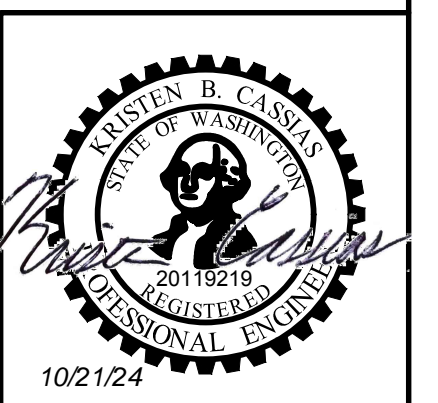
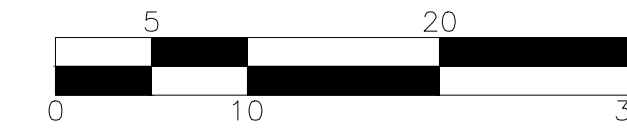
CONTACT PERSON: KYLE CARLSON, PROJECT ENGINEER AT (360) 778-7946



CURB RAMP DETAIL
12TH ST & MILL AVE

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PVD02

4			
3			
2			
1			
Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk.

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
PAVING DETAILS

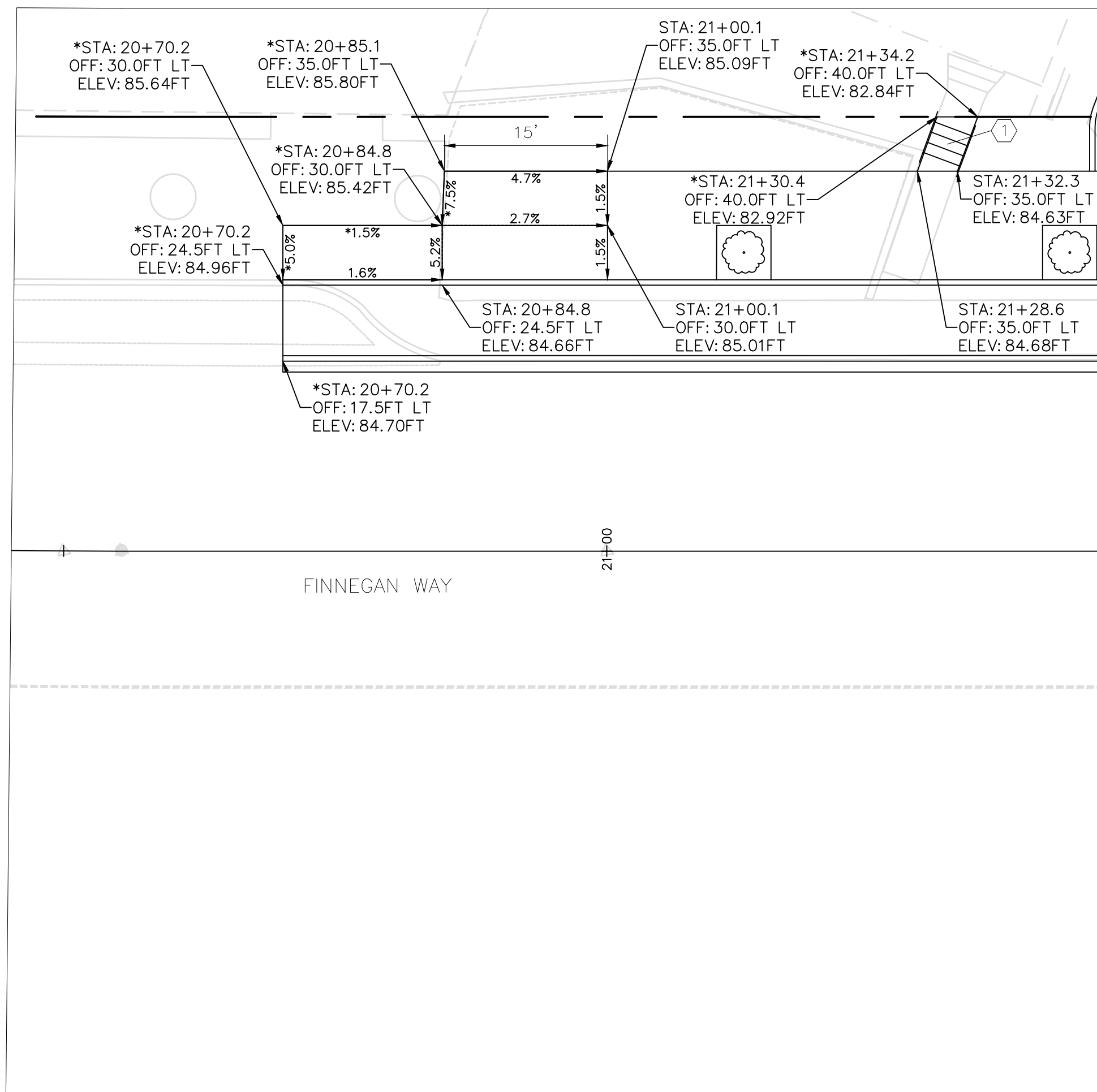
SHEET
29 OF
51

CURB RAMP NOTES

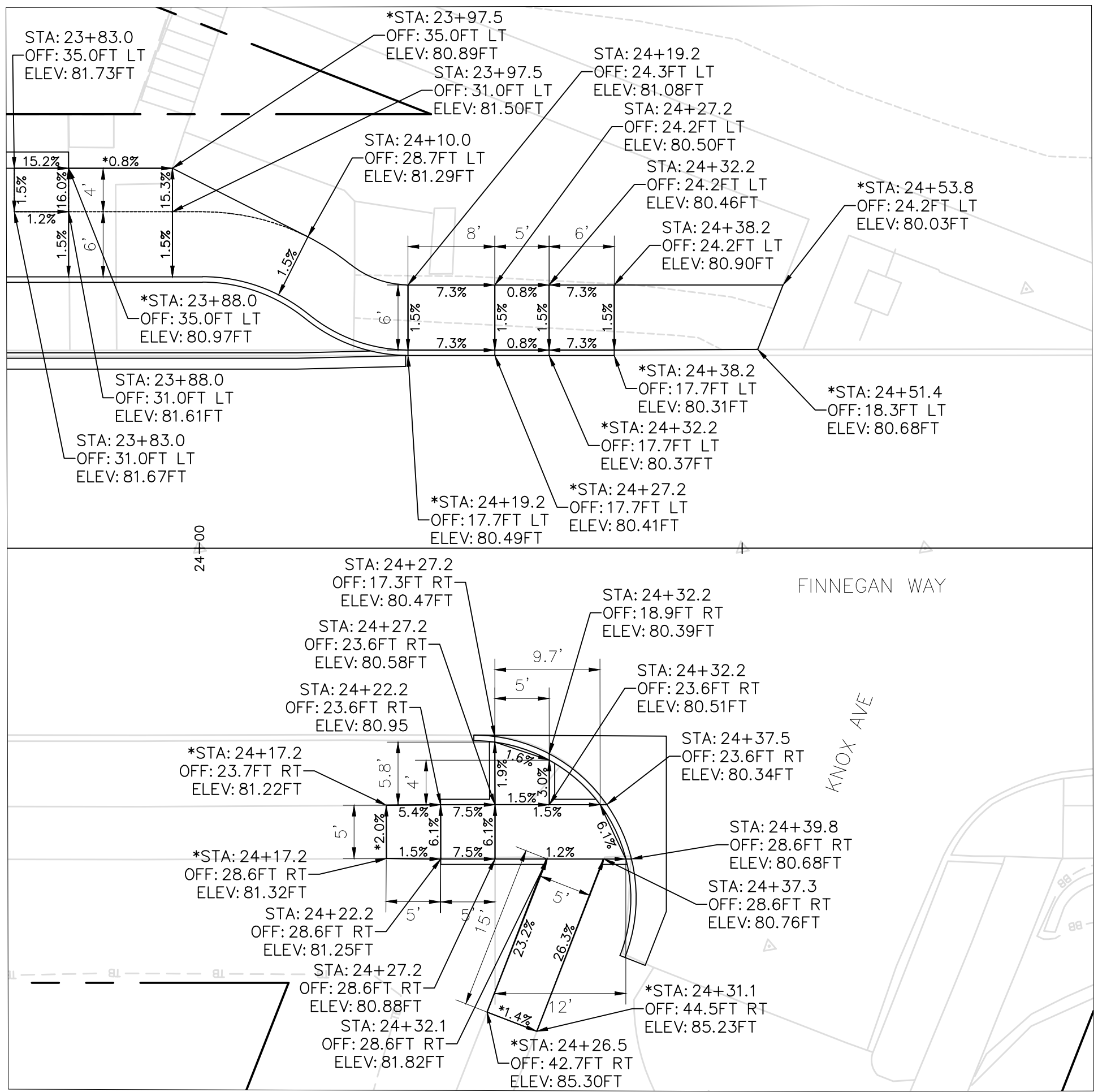
- 1. SEE SHEET PVD01 FOR CURB RAMP NOTES.

CURB RAMP CONSTRUCTION NOTES

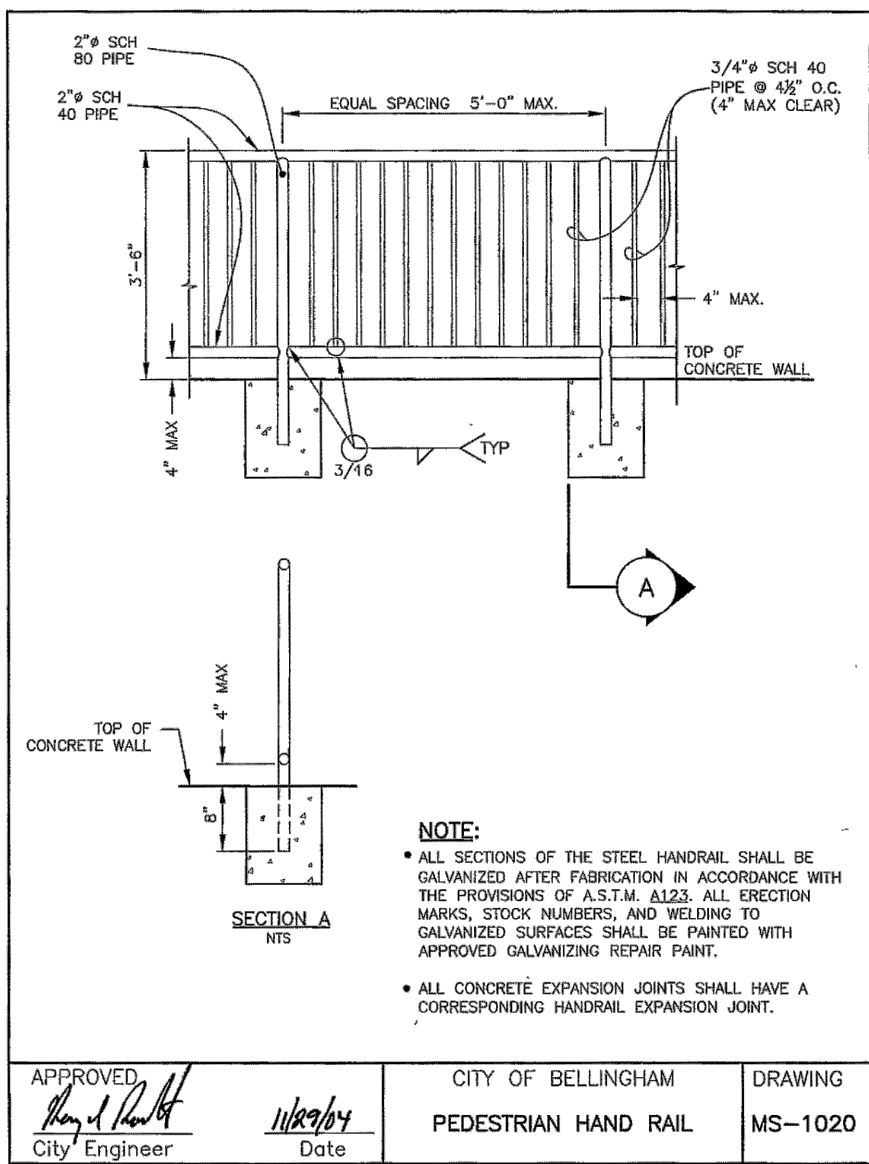
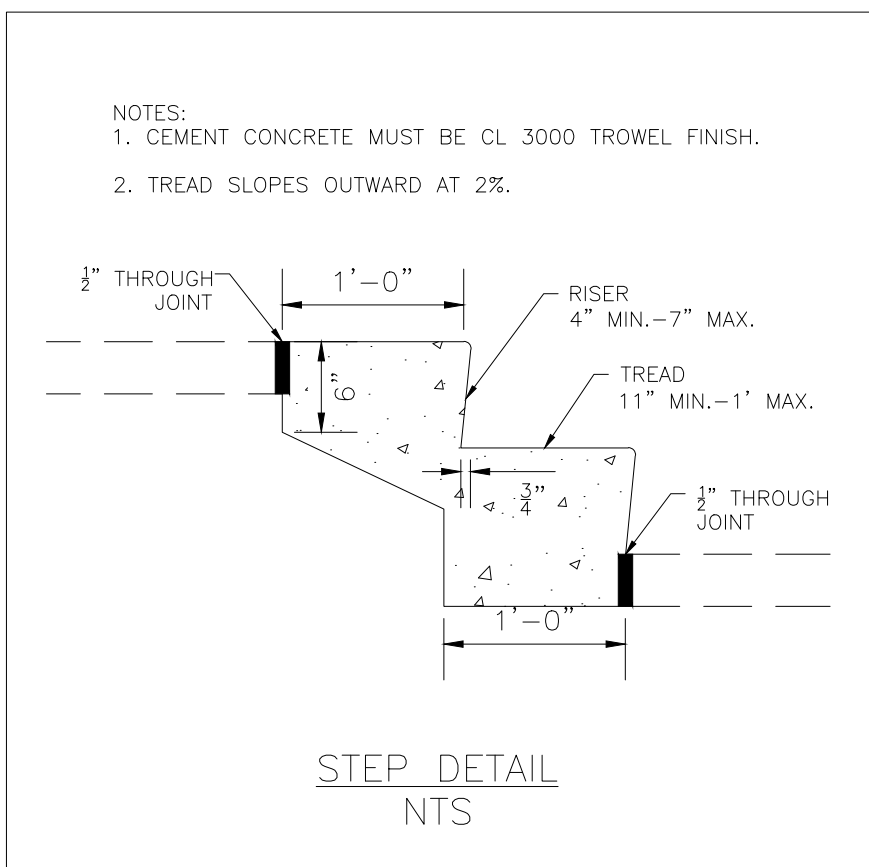
- ① CONSTRUCT STAIRS WITH HANDRAIL PER STEP DETAIL & COB STD. PLAN MS-1020. HANDRAIL TO EXTEND 1FT BEYOND FIRST & LAST RISER NOSING.



CURB RAMP DETAIL
FINNEGAN WAY & BRIAN GRIFFIN LN



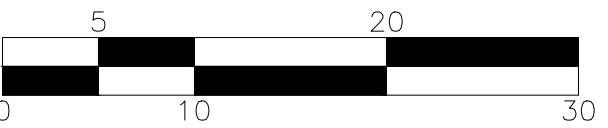
CURB RAMP DETAIL
FINNEGAN WAY & KNOX AVE



APPROVED: [Signature] CITY OF BELLINGHAM DRAWING
City Engineer Date PEDESTRIAN HAND RAIL MS-1020



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PVD03

4			
3			
2			
1			
Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

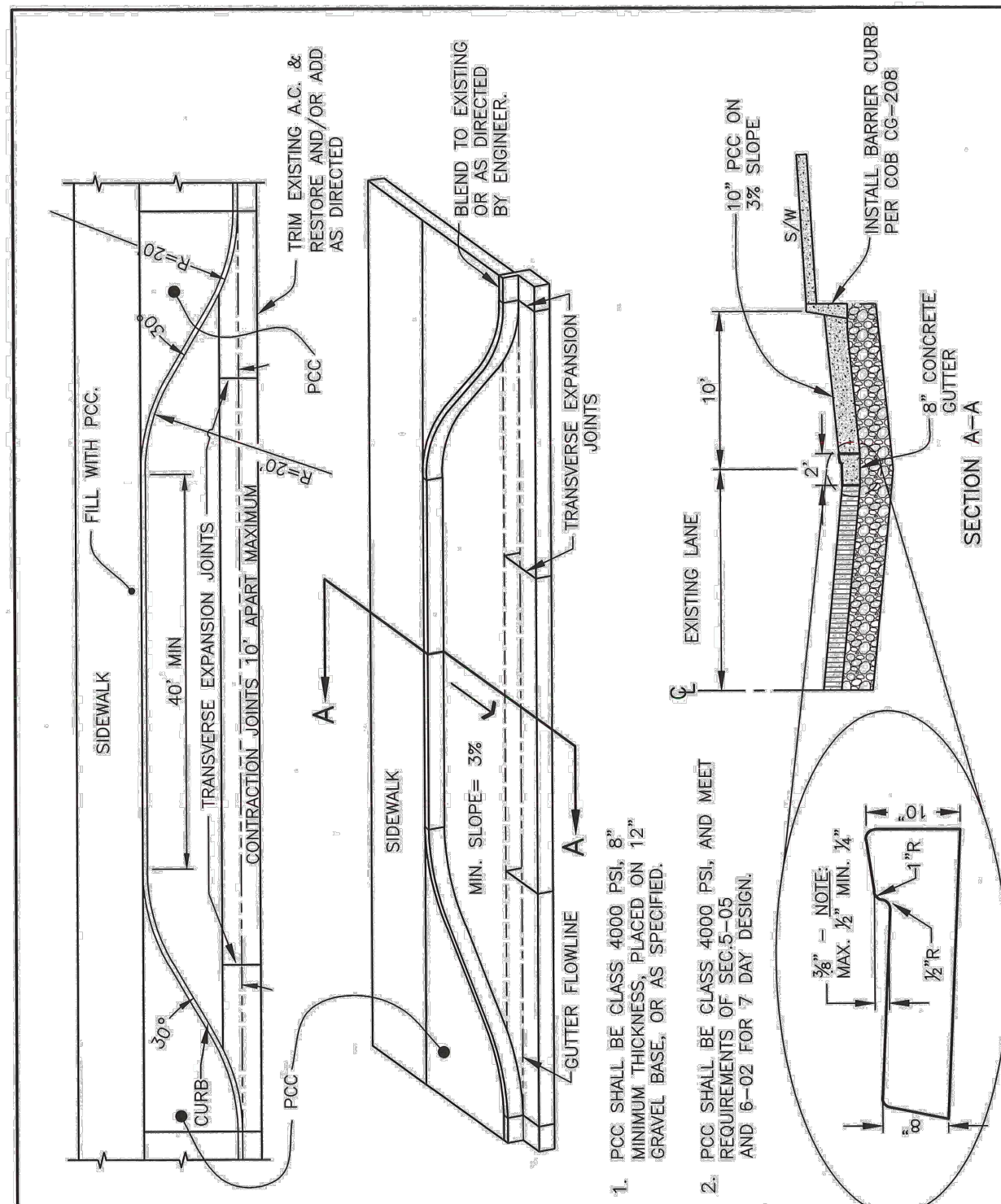
SCALE
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DATUM
NAD 83/98
NAVD 88

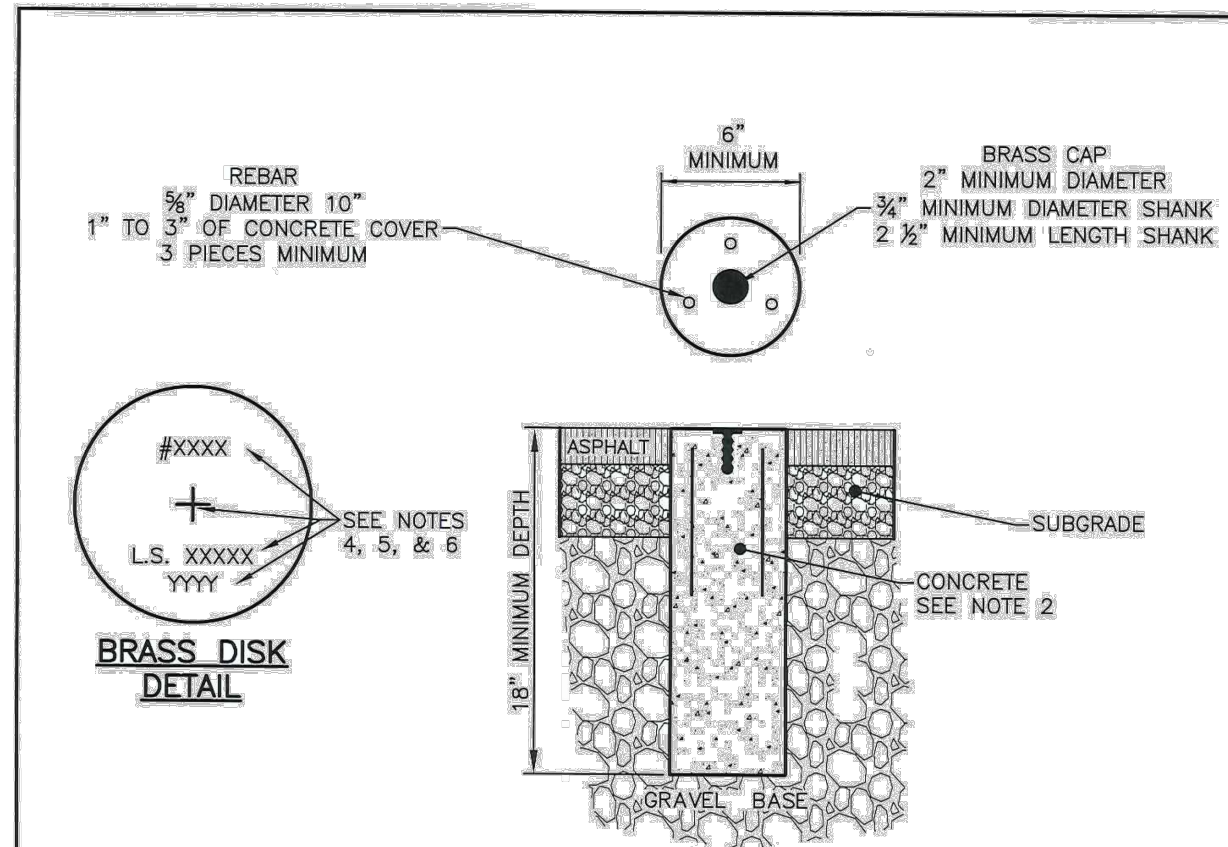
Job. No. ES566
Date 8/9/2024
Field Bk.

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
PAVING DETAILS

SHEET
30 OF
51



APPROVED: [Signature] Date: 28 July 2020
 CITY OF BELLINGHAM
 BUS TURNOUT DETAIL
 DRAWING ST-155

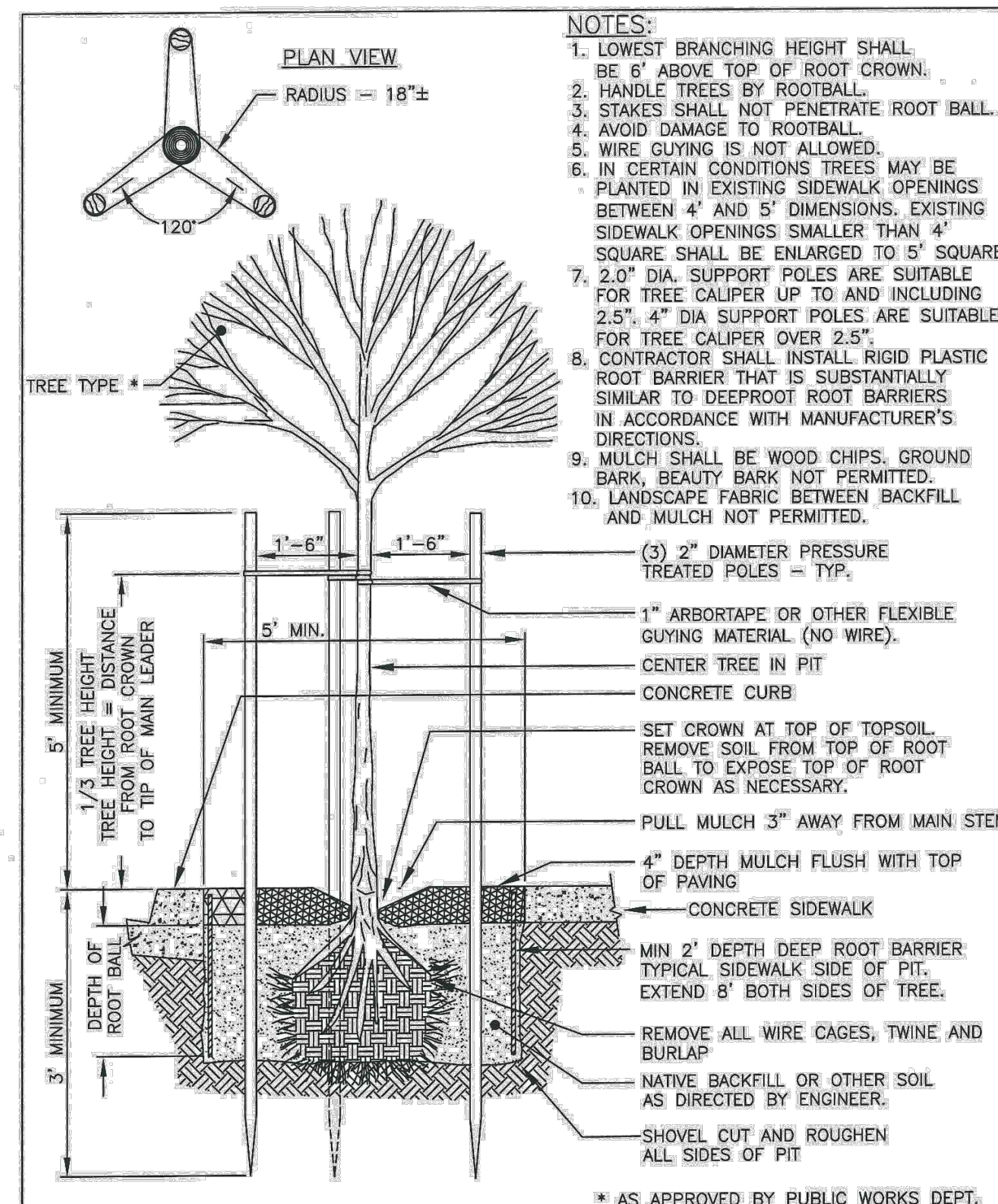


BRASS DISK DETAIL

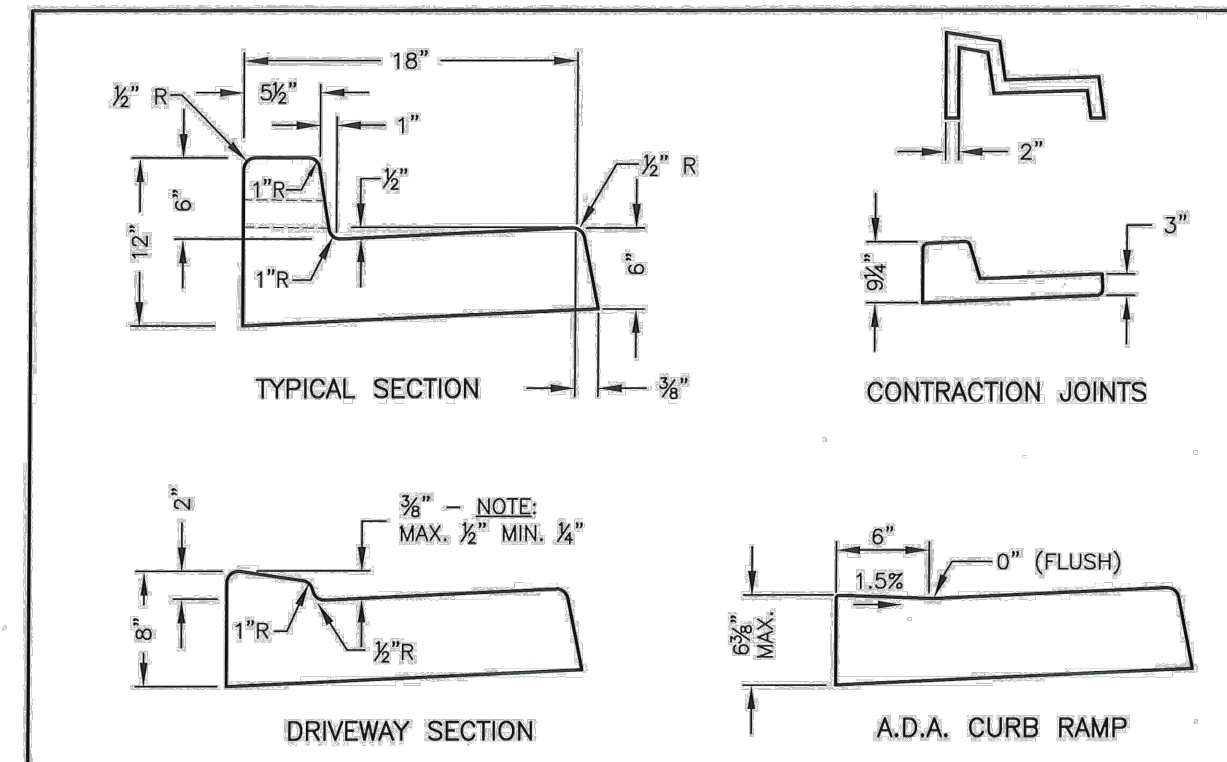
GENERAL NOTES:

- BRASS DISK TO BE EQUAL TO OR BETTER THAN SURV-KAP MODEL M/M-B2 (2" DIAMETER MIN WITH 3/4" DIAMETER x 2" SHANK).
- EXCAVATION SHALL BE FILLED WITH CLASS 4,000 CONCRETE PER WSDOT STANDARD SPEC. 6-02
- POSITION BRASS DISK SO THAT PUNCH-MARK FALLS NO CLOSER THAN 1/4" FROM THE EDGE OF DISK.
- EXACT LOCATION OF CONTROL POINT SHALL BE PUNCHED AFTER CONCRETE HAS SET.
- DISK SHALL BE STAMPED WITH CITY ASSIGNED MONUMENT NUMBER, SURVEYOR'S LICENSE NUMBER, AND THE YEAR THE MONUMENT IS PUNCHED (YYYY).
- IF A PLS MONUMENT, DISK SHALL BE STAMPED ACCORDING TO WAC 332-130-030 AND THE CURRENT BLM MANUAL OF SURVEYING INSTRUCTIONS.
- TIE OUT THE MONUMENT USING TRANSIT TIES WITH DISTANCES AND TWO ANGLES SUBMIT TIE-OUT DOCUMENTATION ON CITY MONUMENT INFORMATION FORM TO CITY PUBLIC WORKS.
- COMPLETE THE DNR MONUMENT REMOVAL PERMIT PROCESS. (RCW 58.24.040, WAC 332-120).

APPROVED: [Signature] Date: 26 May 2017
 CITY OF BELLINGHAM
 CORE MONUMENT IN PAVEMENT
 NEW OR EXISTING
 DRAWING ST-174



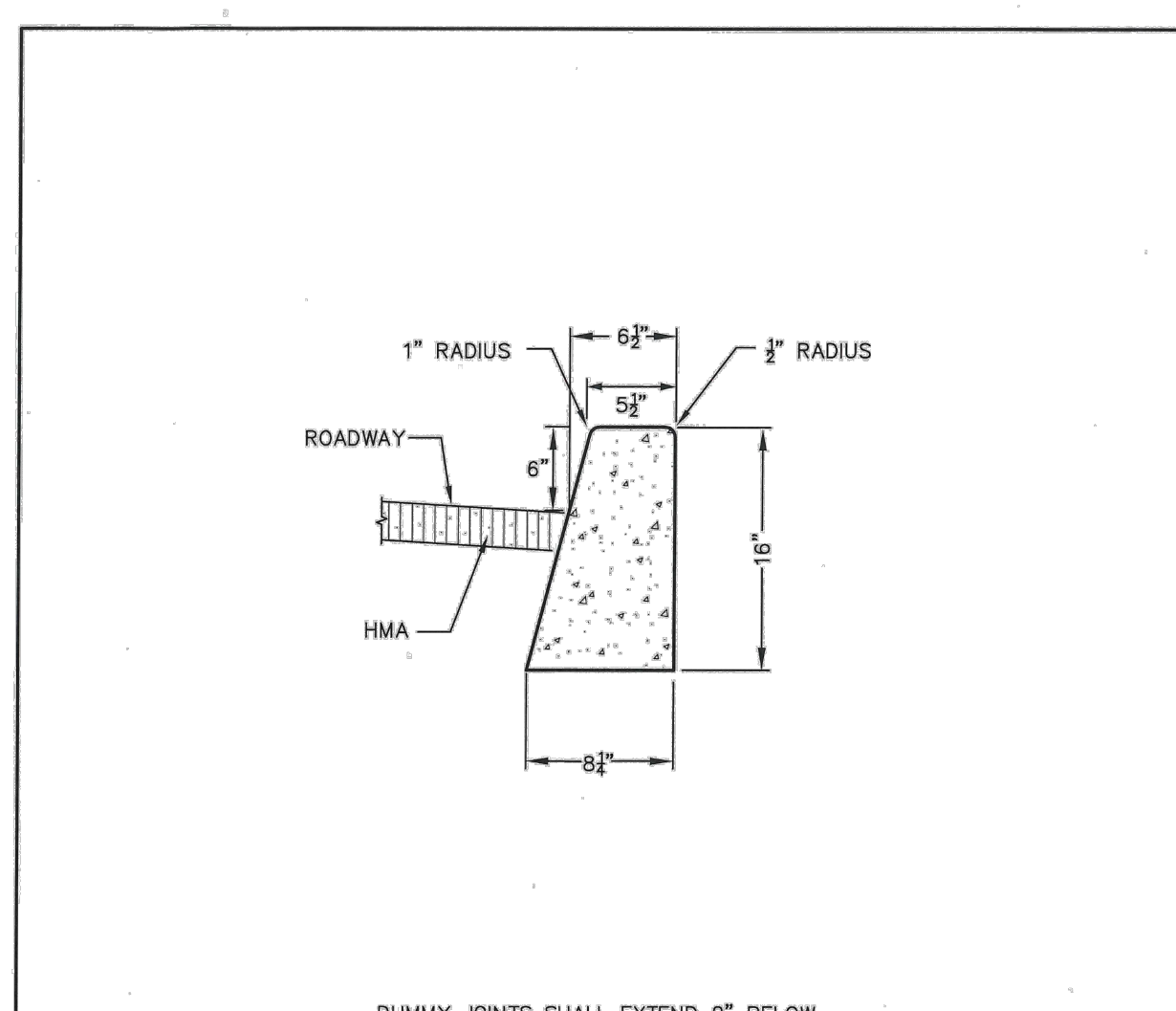
APPROVED: [Signature] Date: 1/28/13
 CITY OF BELLINGHAM
 TREE PLANTING DETAIL
 DRAWING ST-184



GENERAL NOTES:

- CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED 10' C/C. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS SHALL BE CLEANED AND EDGED.
- ALL RADII LESS THAN 100' SHALL USE FLEXIBLE WOOD OR METAL FORMS TO ELIMINATE ANGULAR POINTS AT 10' SECTION POINTS.
- 2" PVD SCHD 40 WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION AND AT MAX. OF 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY CITY ENGINEER.
- 3/4" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS, & COLD JOINTS OR A MAX. OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.
- CONCRETE SHALL BE COMMERCIAL CONCRETE CLASS 3000 PER WSDOT SPEC. 6-02.3(2)B.
- FINISHED WORK SHALL NOT VARY MORE THAN 1/8" INCH IN GRADE AND 1/4" INCH IN ALIGNMENT WHEN CHECKED WITH A 10-FOOT STRAIGHT EDGE.
- EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER HAIR BRUSH.
- WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

APPROVED: [Signature] Date: 24 May 2016
 CITY OF BELLINGHAM
 TYPE 'A' MODIFIED CURB AND GUTTER
 DRAWING CG-200

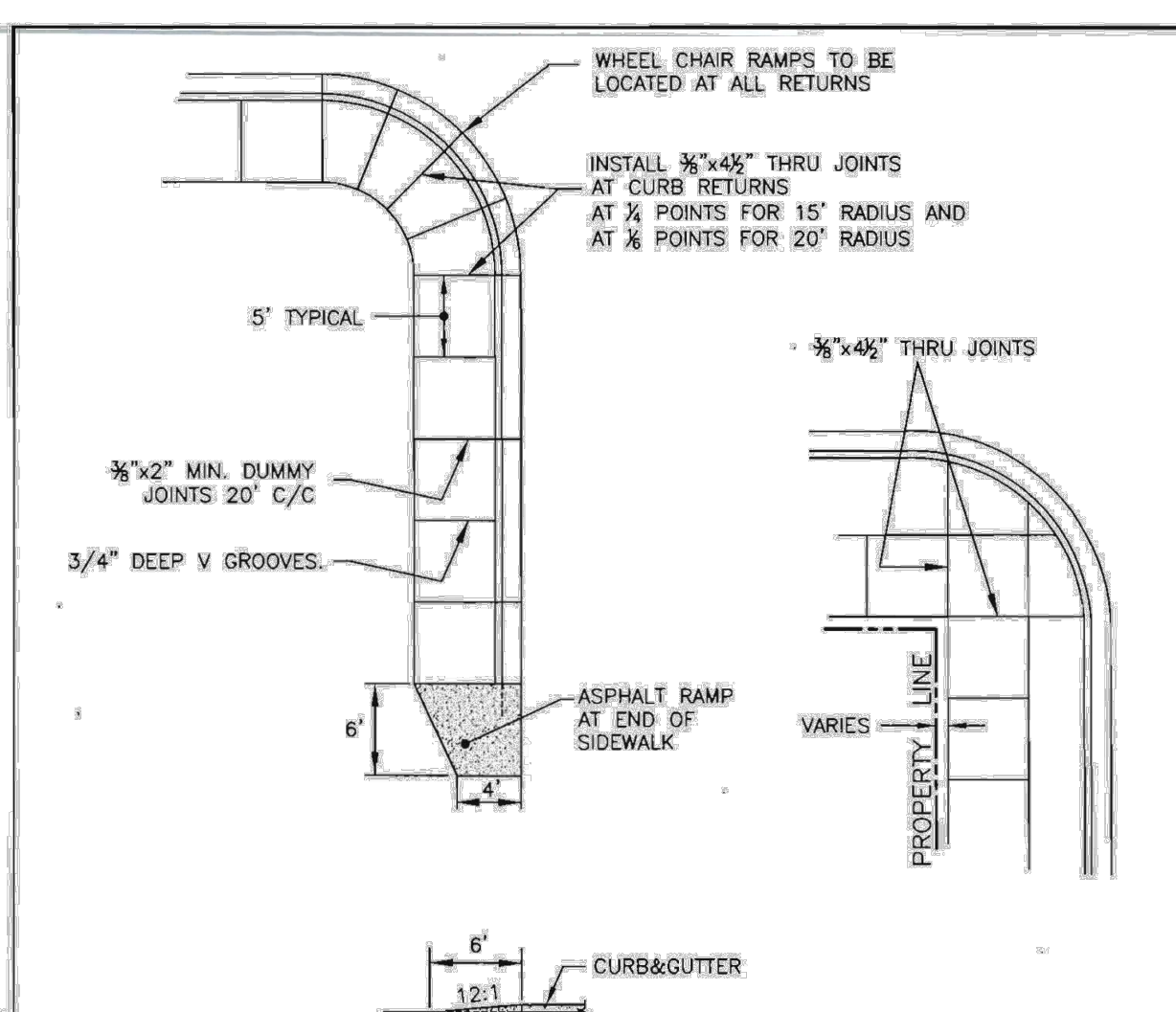


DUMMY JOINTS SHALL EXTEND 2" BELOW GUTTER LINE, BE MINIMUM OF 3/8" THICK AND BE 10' C/C OR AS DIRECTED BY THE CITY ENGINEER. PARTIAL DUMMY PLATES MAY BE USED IN LIEU OF DUMMY JOINTS IF APPROVED BY THE CITY ENGINEER.

2" WEEP HOLES EVERY 60' AND EACH SIDE OF DRIVEWAYS.

CONCRETE SHALL BE AIR ENTRAINED CONCRETE CLASS 3000 PER WSDOT STANDARD SPECIFICATION 6-04.

APPROVED: [Signature] Date: 12 SEPT 2016
 CITY OF BELLINGHAM
 CEMENT CONCRETE TRAFFIC CURB
 DRAWING CG-208



WHEEL CHAIR RAMPS TO BE LOCATED AT ALL RETURNS

INSTALL 3/8"x4" THRU JOINTS AT CURB RETURNS AT 1/2 POINTS FOR 15' RADIUS AND AT 1/4 POINTS FOR 20' RADIUS

3/8"x2" MIN. DUMMY JOINTS 20' C/C

3/4" DEEP V GROOVES.

ASPHALT RAMP AT END OF SIDEWALK

ASPHALT RAMP

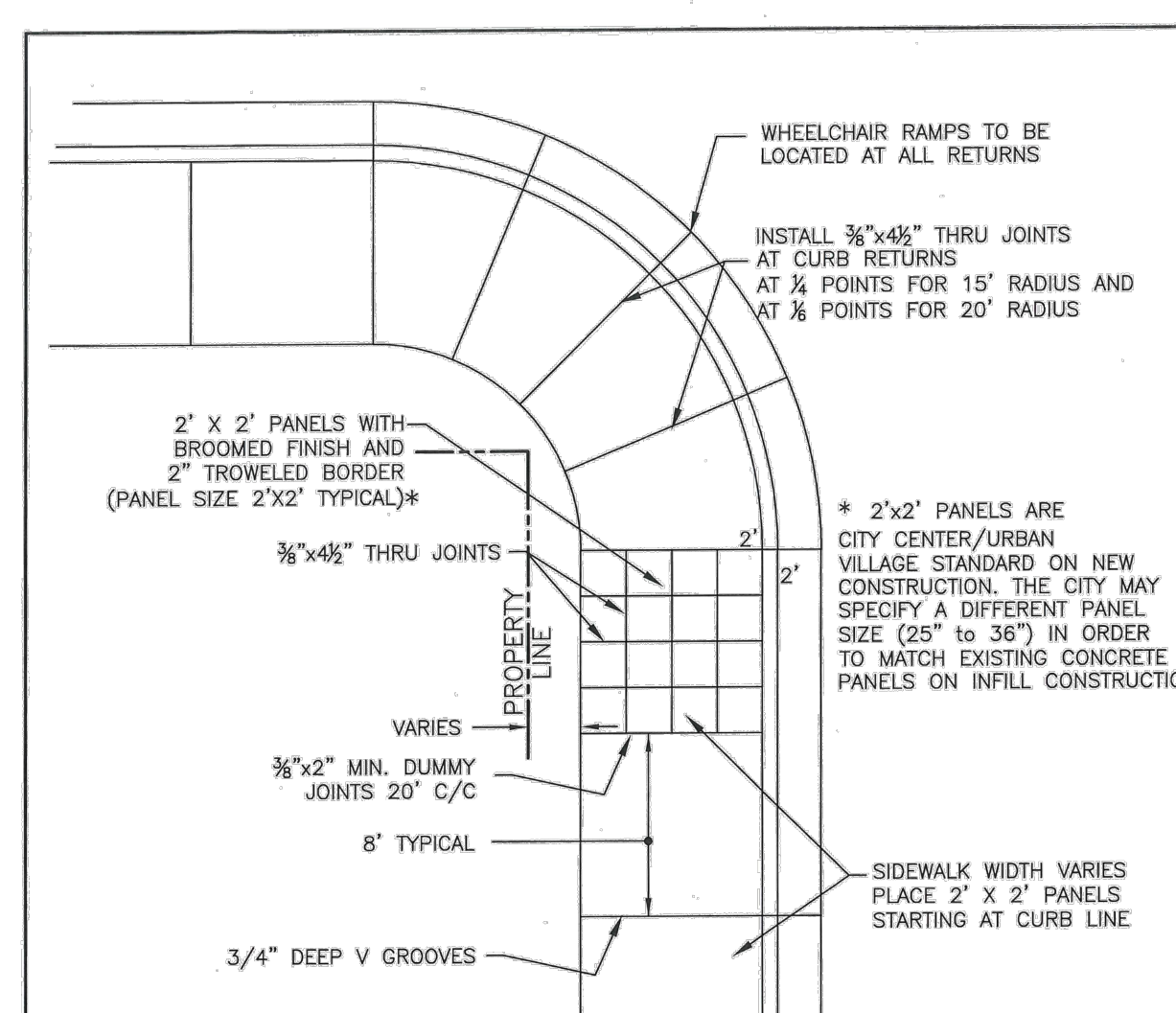
4" CEMENT CONCRETE FOR VERTICAL CURB 6" CEMENT CONCRETE FOR ROLLED CURB

UNDISTURBED SUBGRADE OR APPROVED MATERIAL COMPACTED TO 95% OPTIMUM DENSITY.

2" OF 3/8" WASHED ROCK

BACK OF SIDEWALK DRAIN IN CUT SECTION (TYPICAL)

APPROVED: [Signature] Date: 10/19/07
 CITY OF BELLINGHAM
 SIDEWALK
 DRAWING CG-230



WHEELCHAIR RAMPS TO BE LOCATED AT ALL RETURNS

INSTALL 3/8"x4" THRU JOINTS AT CURB RETURNS AT 1/2 POINTS FOR 15' RADIUS AND AT 1/4 POINTS FOR 20' RADIUS

2' x 2' PANELS WITH BROOMED FINISH AND 2" TROWELED BORDER (PANEL SIZE 2'x2' TYPICAL)*

* 2'x2' PANELS ARE CITY CENTER/URBAN VILLAGE STANDARD ON NEW CONSTRUCTION. THE CITY MAY SPECIFY A DIFFERENT PANEL SIZE (25" to 36") IN ORDER TO MATCH EXISTING CONCRETE PANELS ON INFILL CONSTRUCTION.

3/8"x4" THRU JOINTS

VARIES

3/8"x2" MIN. DUMMY JOINTS 20' C/C

8' TYPICAL

3/4" DEEP V GROOVES

VARIES

ASPHALT RAMP AT END OF SIDEWALK

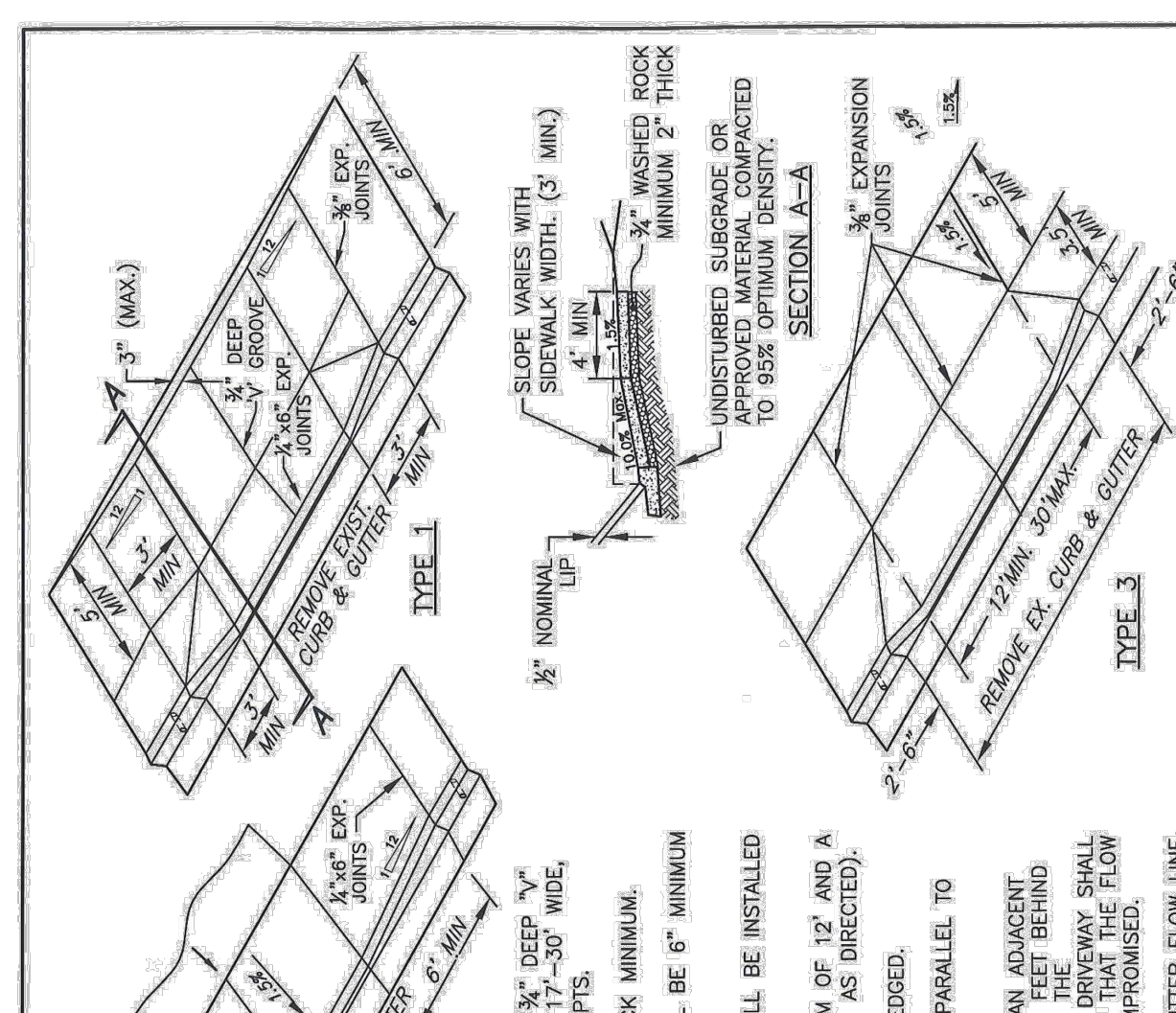
ASPHALT RAMP

15' MAX.

CURB & GUTTER

15' MAX.

APPROVED: [Signature] Date: 12 SEPT 2016
 CITY OF BELLINGHAM
 CITY CENTER/URBAN VILLAGE SIDEWALK
 DRAWING CG-232



GENERAL NOTES:

FOR DRIVEWAYS 12'-15' WIDE, PLACE 3/4" DEEP V GROOVES AT 10' C/C. FOR DRIVEWAYS 15'-30' WIDE, PLACE 3/4" DEEP V GROOVES AT 1/2 PITS.

DRIVEWAY SECTIONS SHALL BE 6" THICK MINIMUM.

DRIVEWAY SECTIONS AND RAMPS SHALL BE 6" MINIMUM CONCRETE CLASS 'C'.

2" PVD SCHD 40 WEEP HOLES SHALL BE INSTALLED EACH SIDE OF DRIVEWAY.

DRIVEWAY WIDTHS SHALL BE A MINIMUM OF 12' AND A MAXIMUM OF 30' (OR MATCH EXISTING AS DIRECTED).

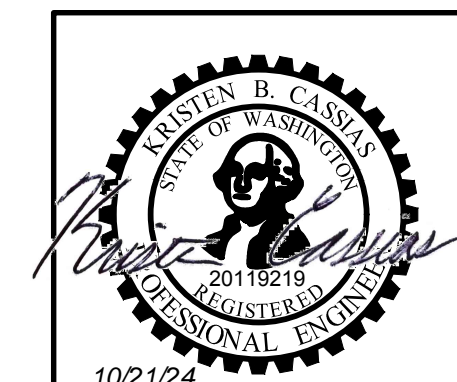
ALL JOINTS SHALL BE CLEANED AND EDGED.

SECTION SHALL BE BRUSH FINISHED (PARALLEL TO STREET) WITH FIBER BRUSH.

FOR CURB CUTS THAT DO NOT HAVE AN ADJACENT DRIVEWAY, THE CURB SHALL BE 0.5 FEET ABOVE THE CORRESPONDING LIP OF GUTTER. THE DRIVEWAY SHALL BE BRUSH FINISHED WITH FIBER BRUSH. THE BACKSLOPE OF THE GUTTER IS NOT COMPROMISED.

ALL SLOPES ARE RELATIVE TO THE GUTTER FLOW LINE.

APPROVED: [Signature] Date: 2/22/13
 CITY OF BELLINGHAM
 DRIVEWAY SECTIONS
 DRAWING CG-260



10/21/24

transpogroup 7T
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 INSPECTOR

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 CITY ENGINEER_M.L.W.
 ASSISTANT DIRECTOR_M.A.O.

CITY OF BELLINGHAM, WASHINGTON
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

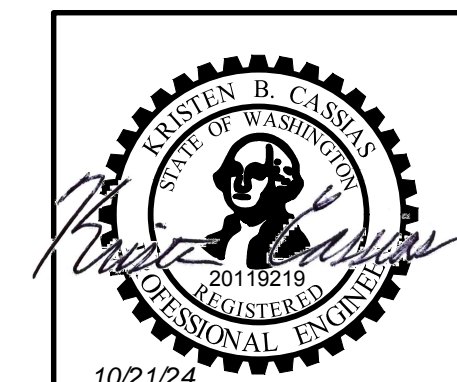
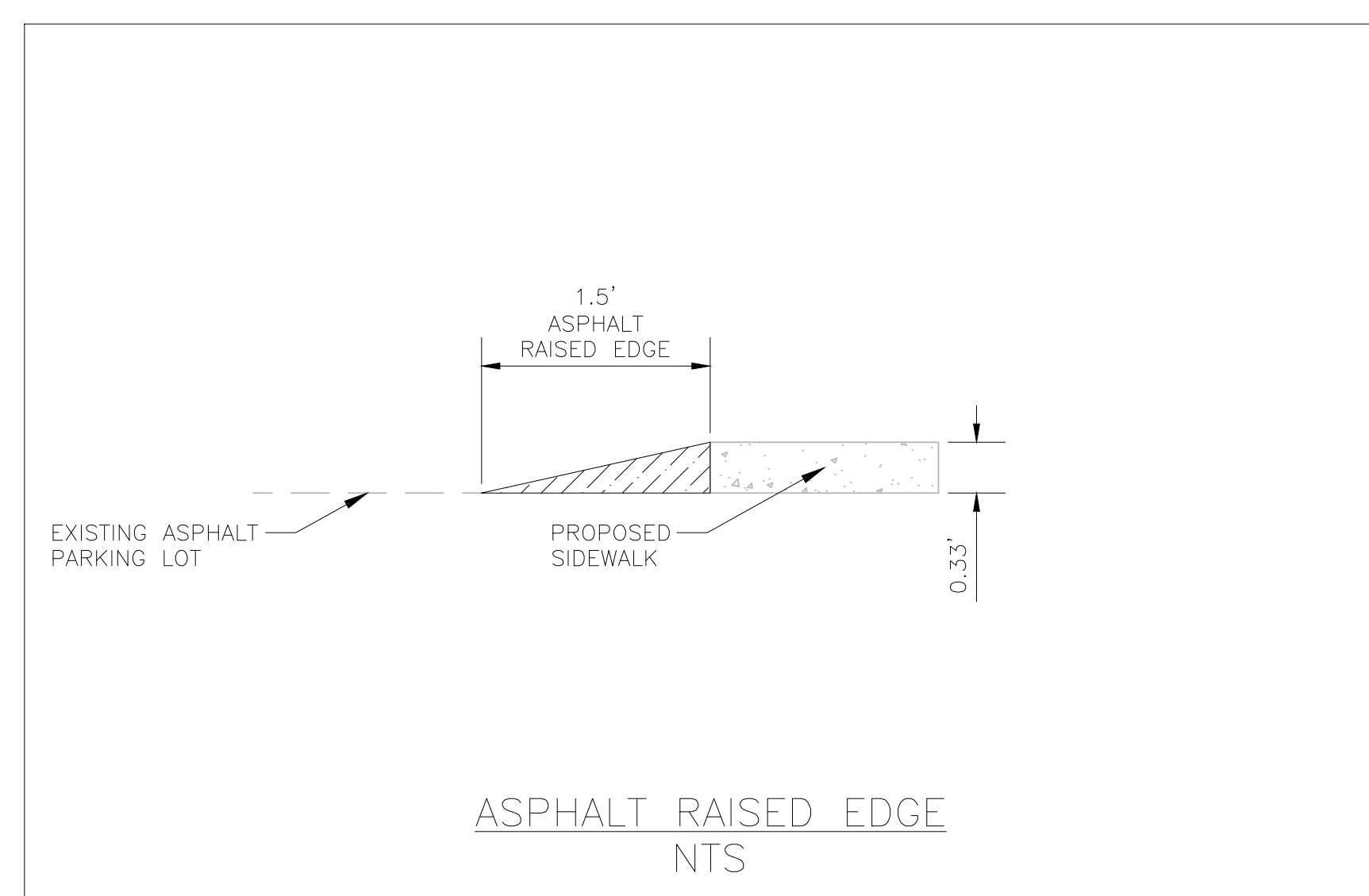
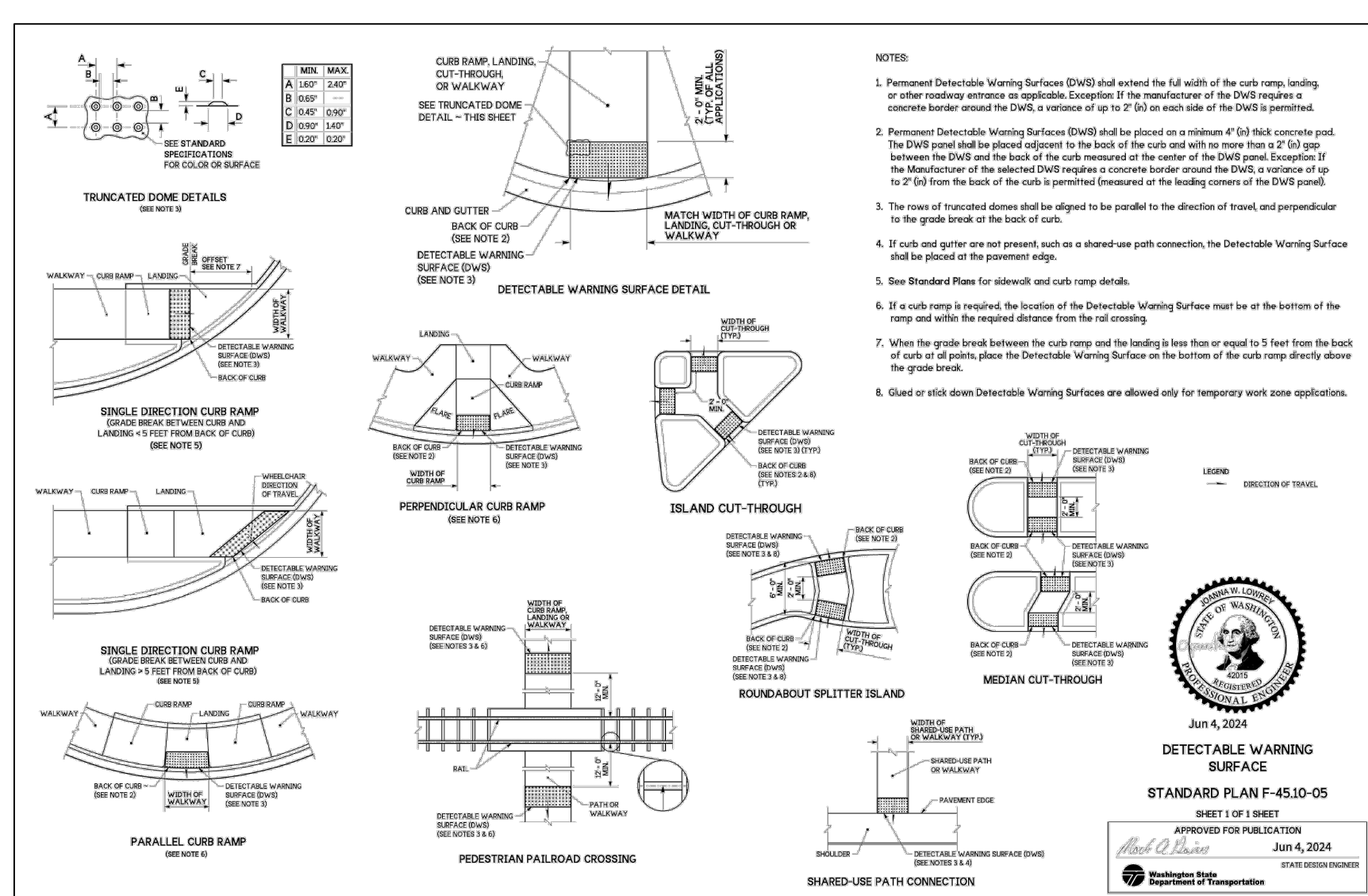
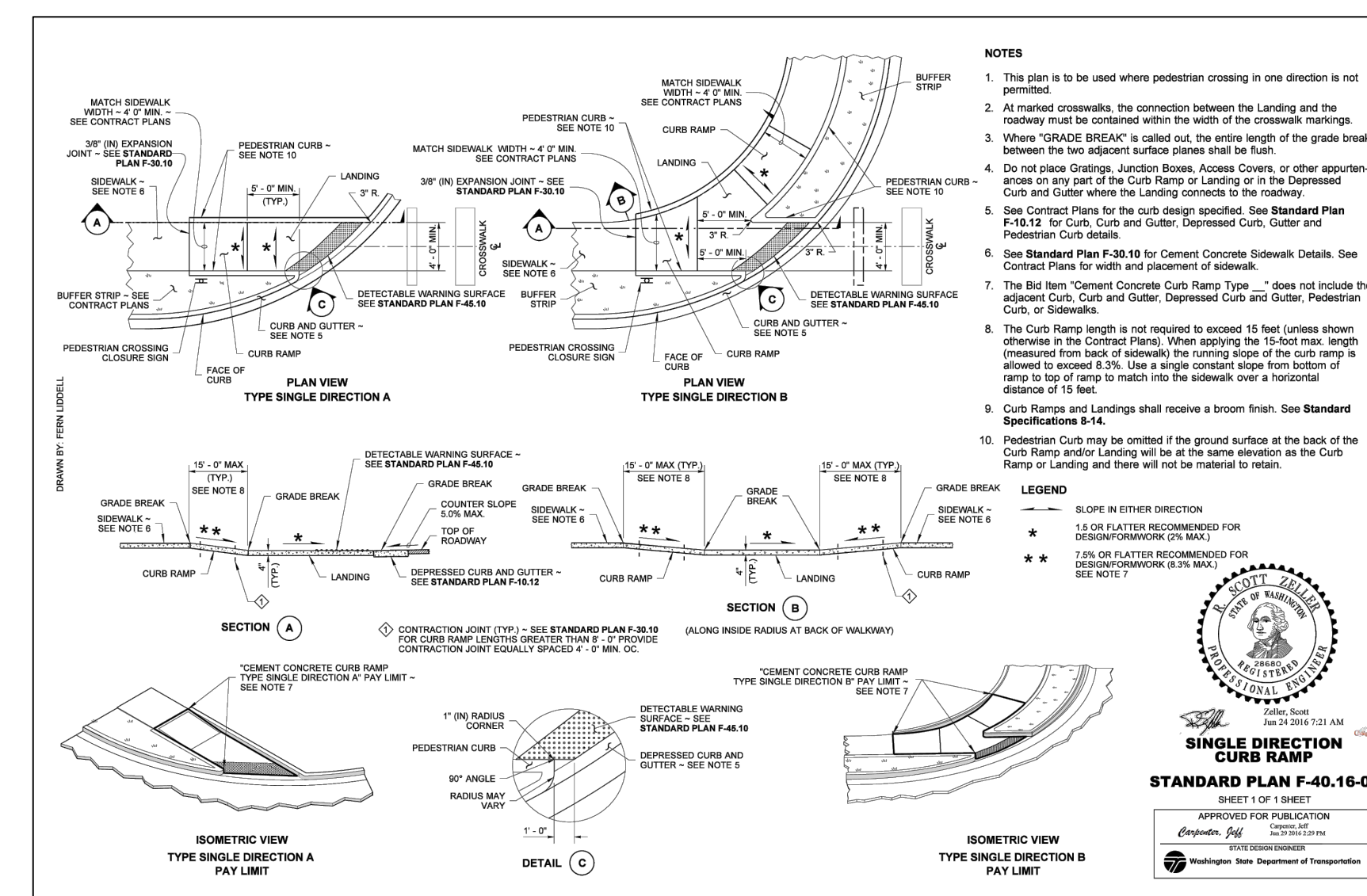
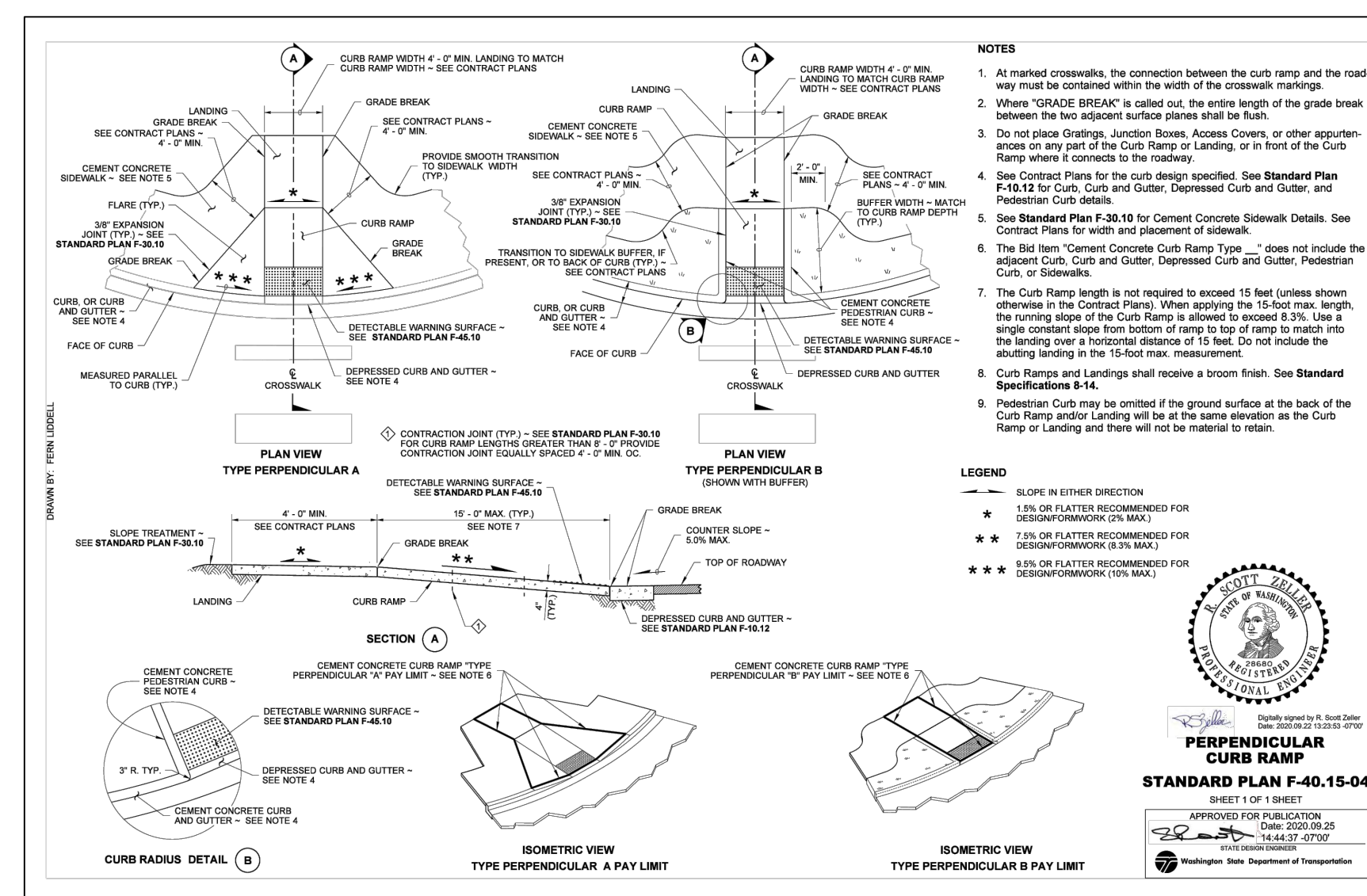
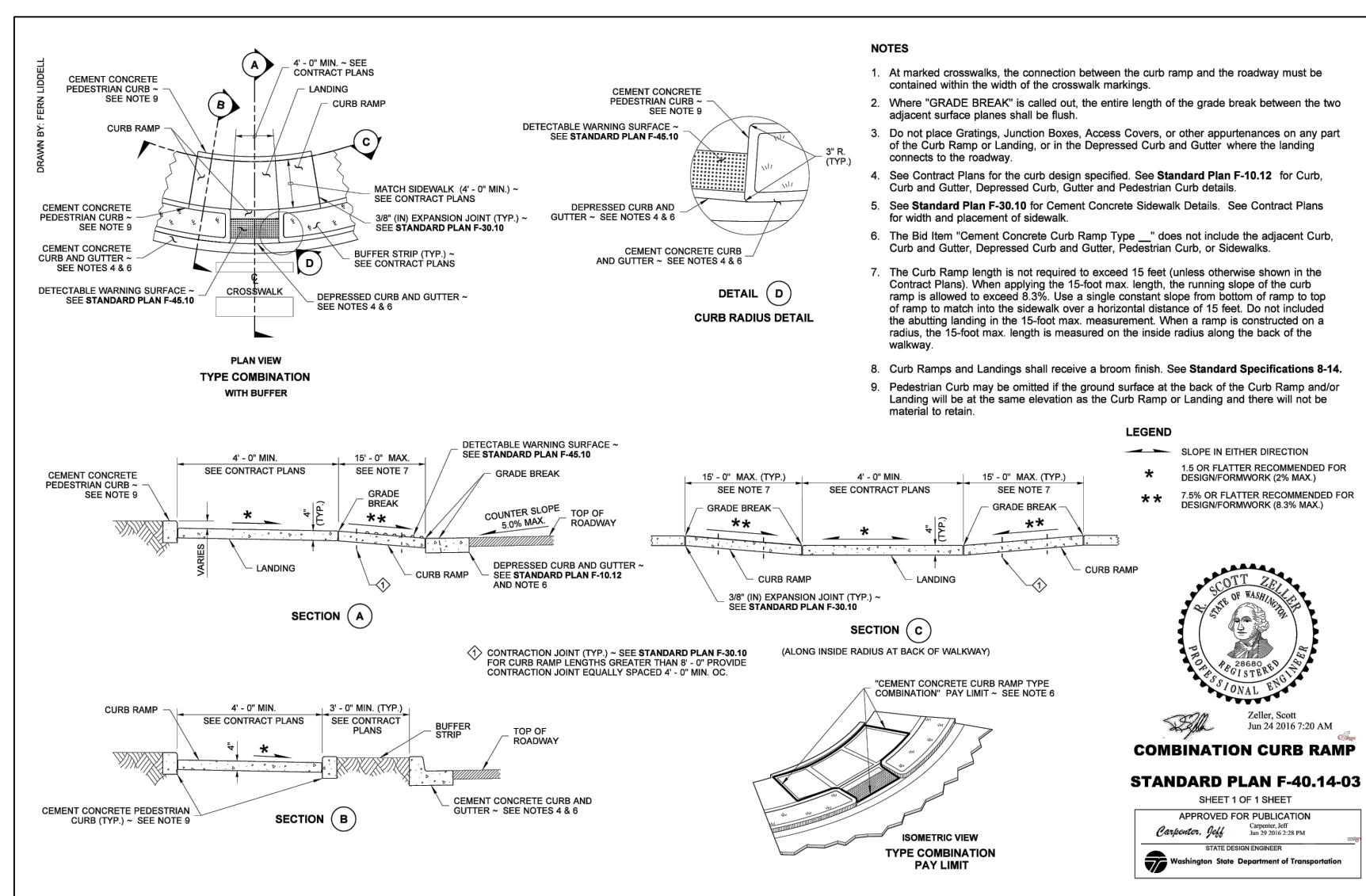
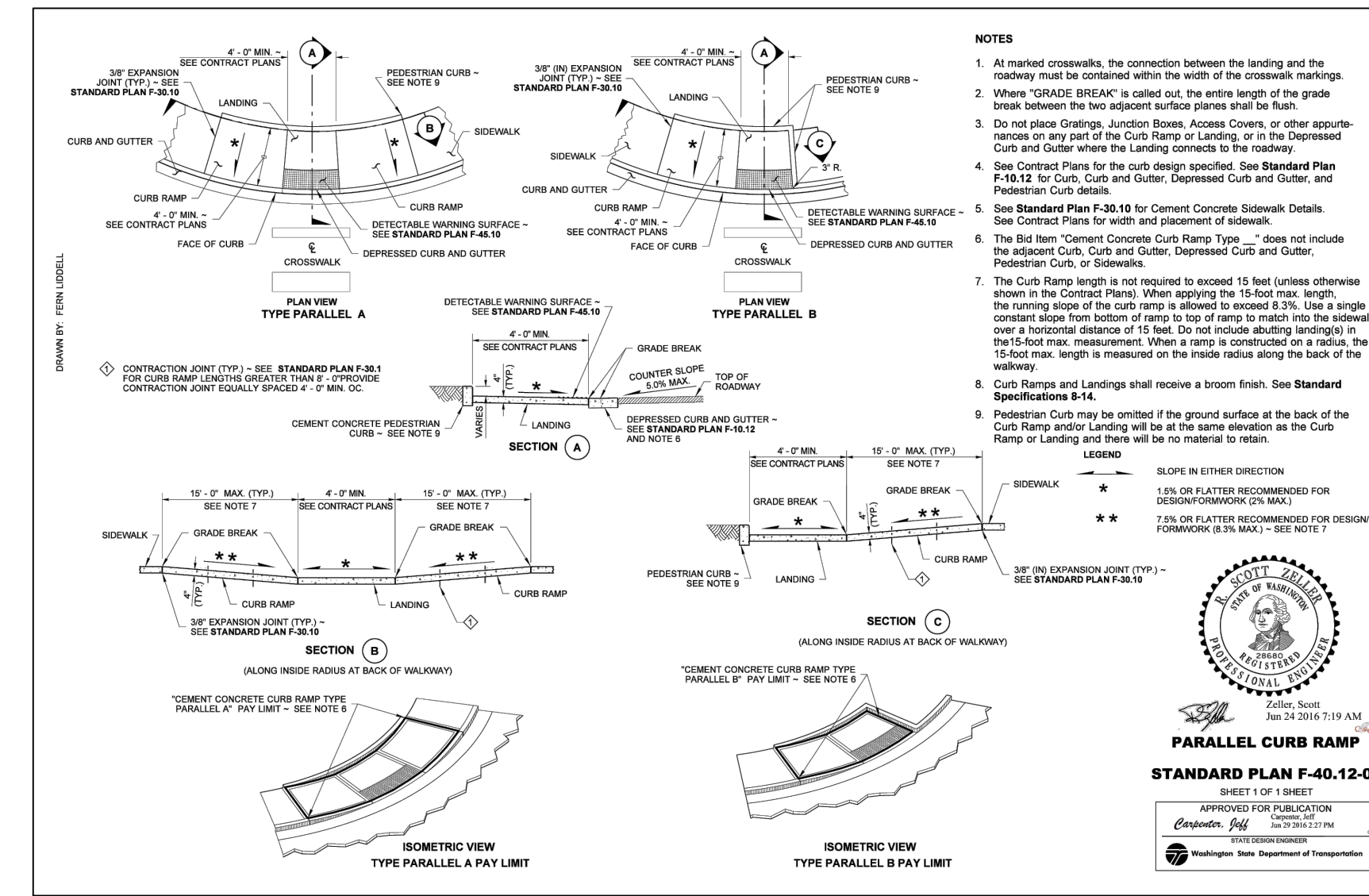
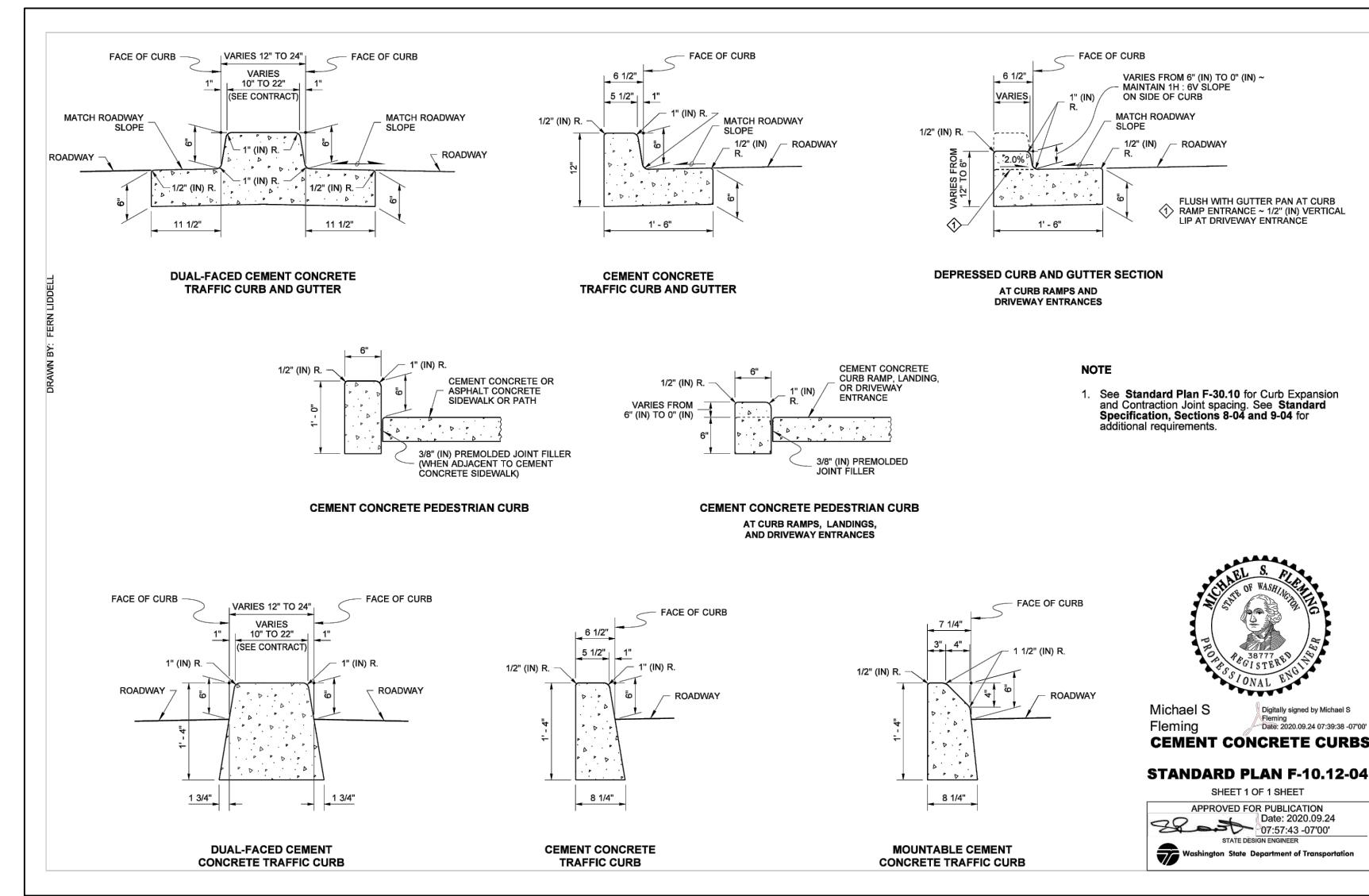
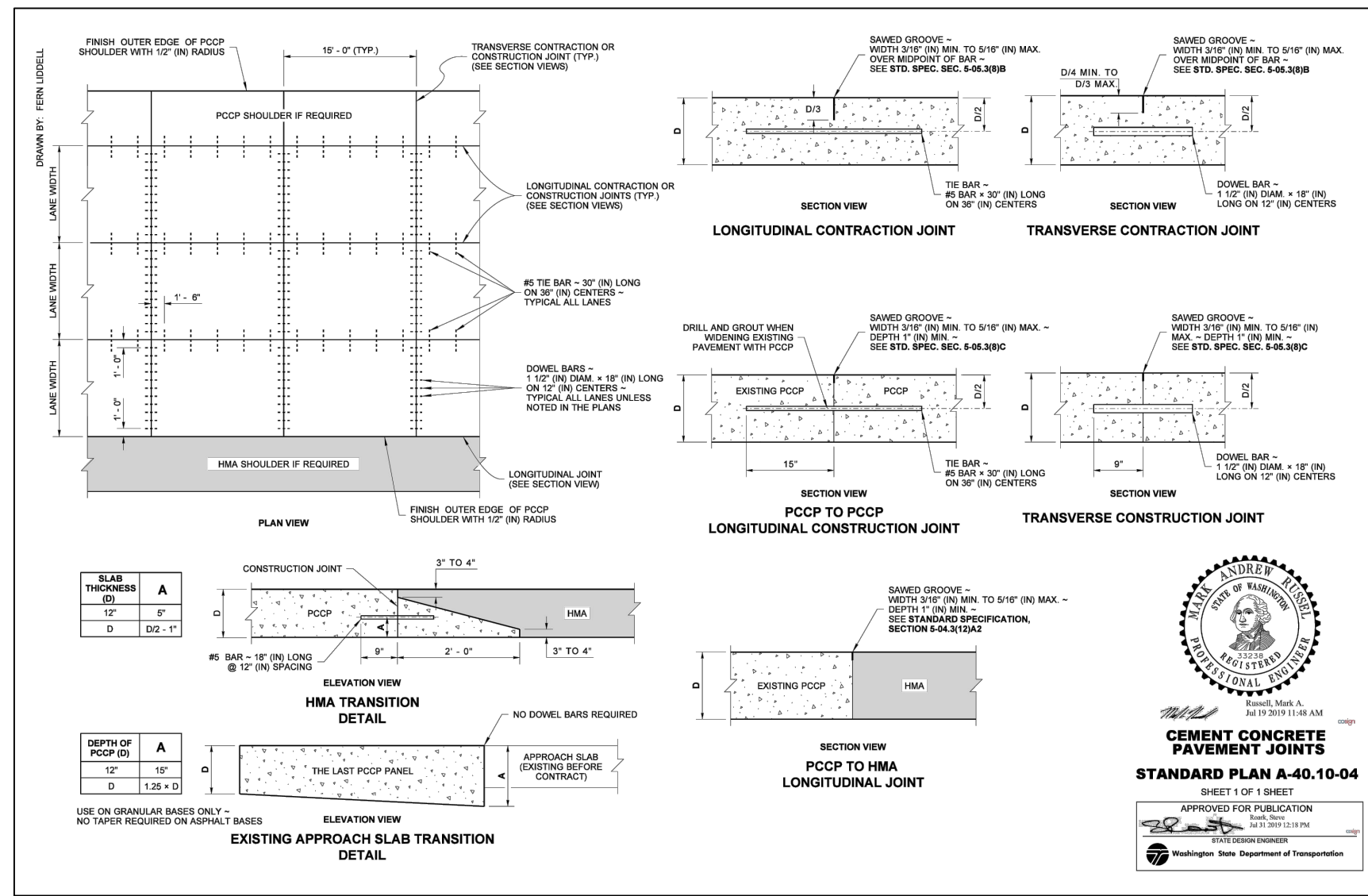
SCALE
 Horiz. AS NOTED
 Vert. AS NOTED

DATUM
 NAD 83/98
 NAVD 88

Job. No. ES566
 Date 8/9/2024
 Field Bk.

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
 PAVING DETAILS

SHEET 31 OF 51



10/21/24
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CITY OF BELLINGHAM, WASHINGTON
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SCALE
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DATUM
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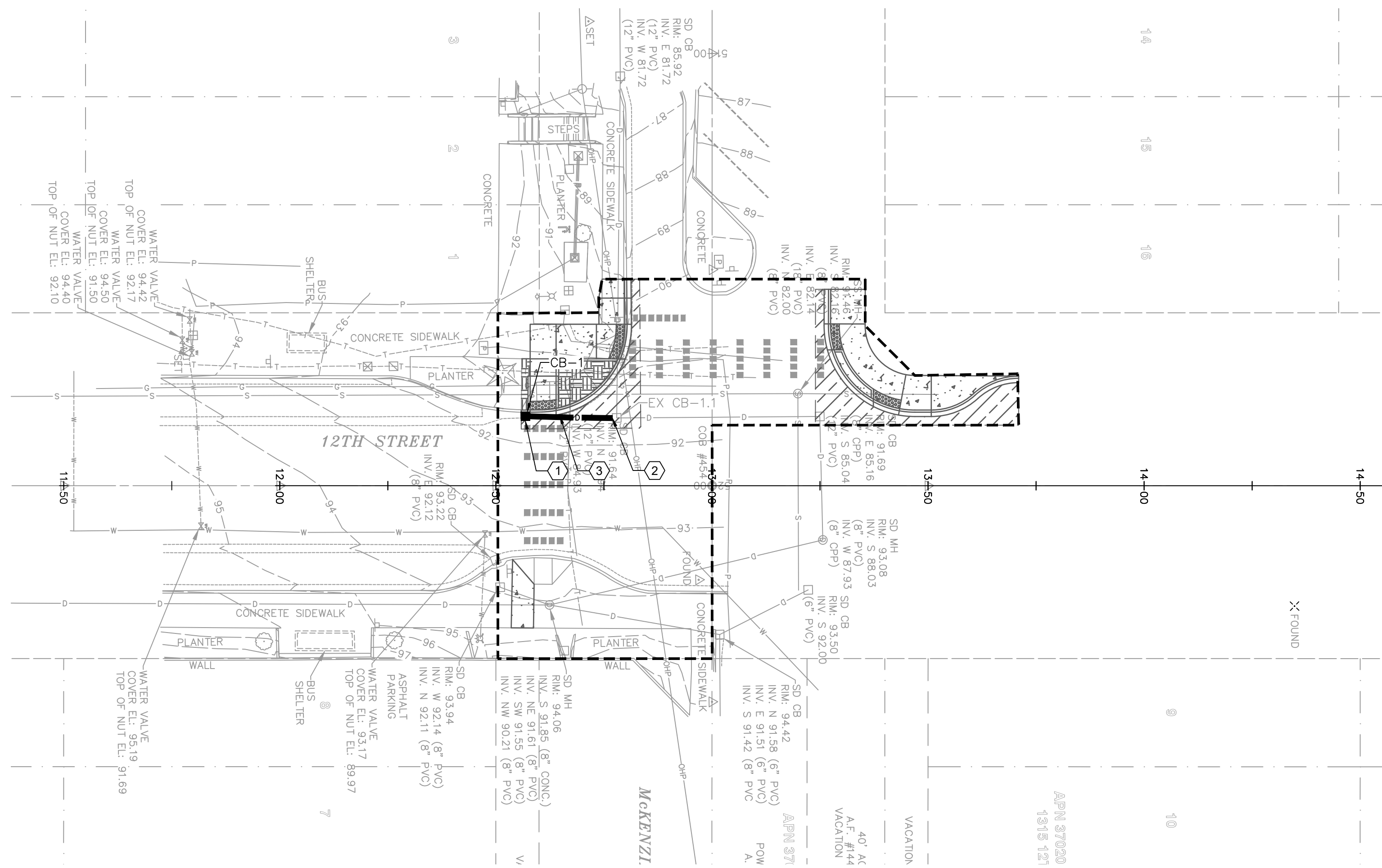
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 Date 8/9/2024
 Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
PAVING DETAILS

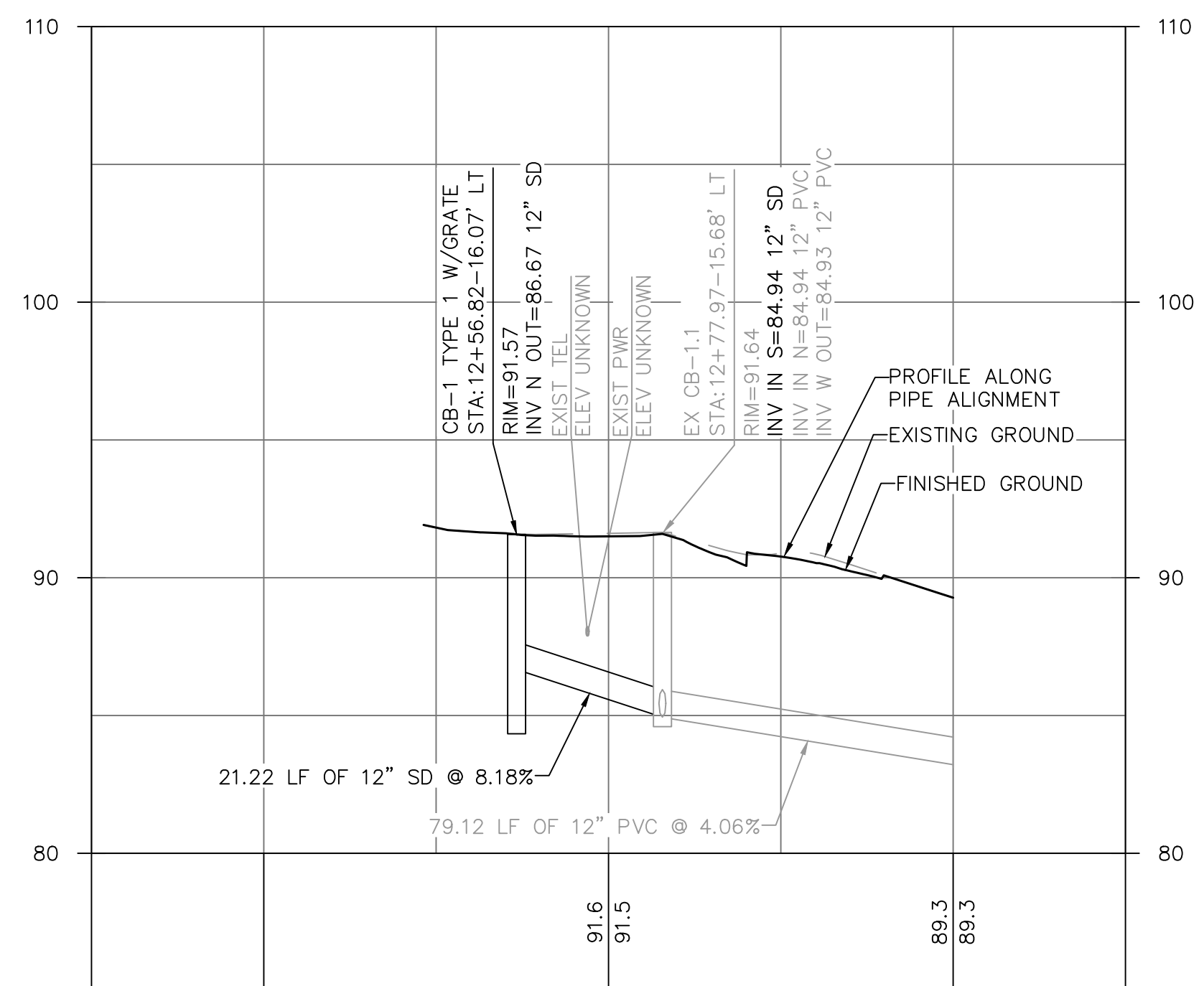
SHEET
 32 OF
 51

CONTACT PERSON: KYLE CARLSON , PROJECT ENGINEER AT (360) 778-7946

SEC. 01, T. 37 N., R. 02 E., W.M.



PLAN VIEW- 12TH ST & MCKENZIE AVE



PROFILE VIEW

NOTES

- SEE INDEX OF SHEETS TO REFERENCE GENERAL NOTES, TESC NOTES, LEGEND, DEMOLITION, TYPICAL SECTIONS, PAVING, AND DETAILS.

CONSTRUCTION NOTES

- INSTALL TYPE 1 CATCH BASIN PER WSDOT STANDARD PLAN B-5.20-03. INSTALL ADA GRATE AND FRAME PER WSDOT STANDARD PLANS B-30.10-03. AND B-30.15-00.
- CORE DRILL FOR CONNECTION TO EXISTING CATCH BASIN.
- INSTALL STORM DRAIN AND BEDDING PER COB STANDARD PLAN DR-538.

LEGEND

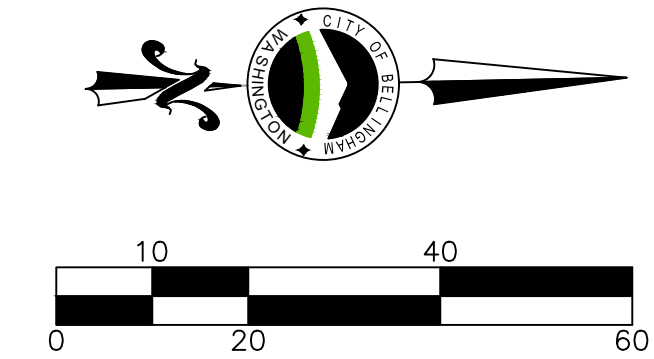
- STORM DRAINAGE PIPE
- CATCH BASIN TYPE 1



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CITY ENGINEER CMAS
ASSISTANT DIRECTOR MAO

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"=20'
Vert. 1"=5'

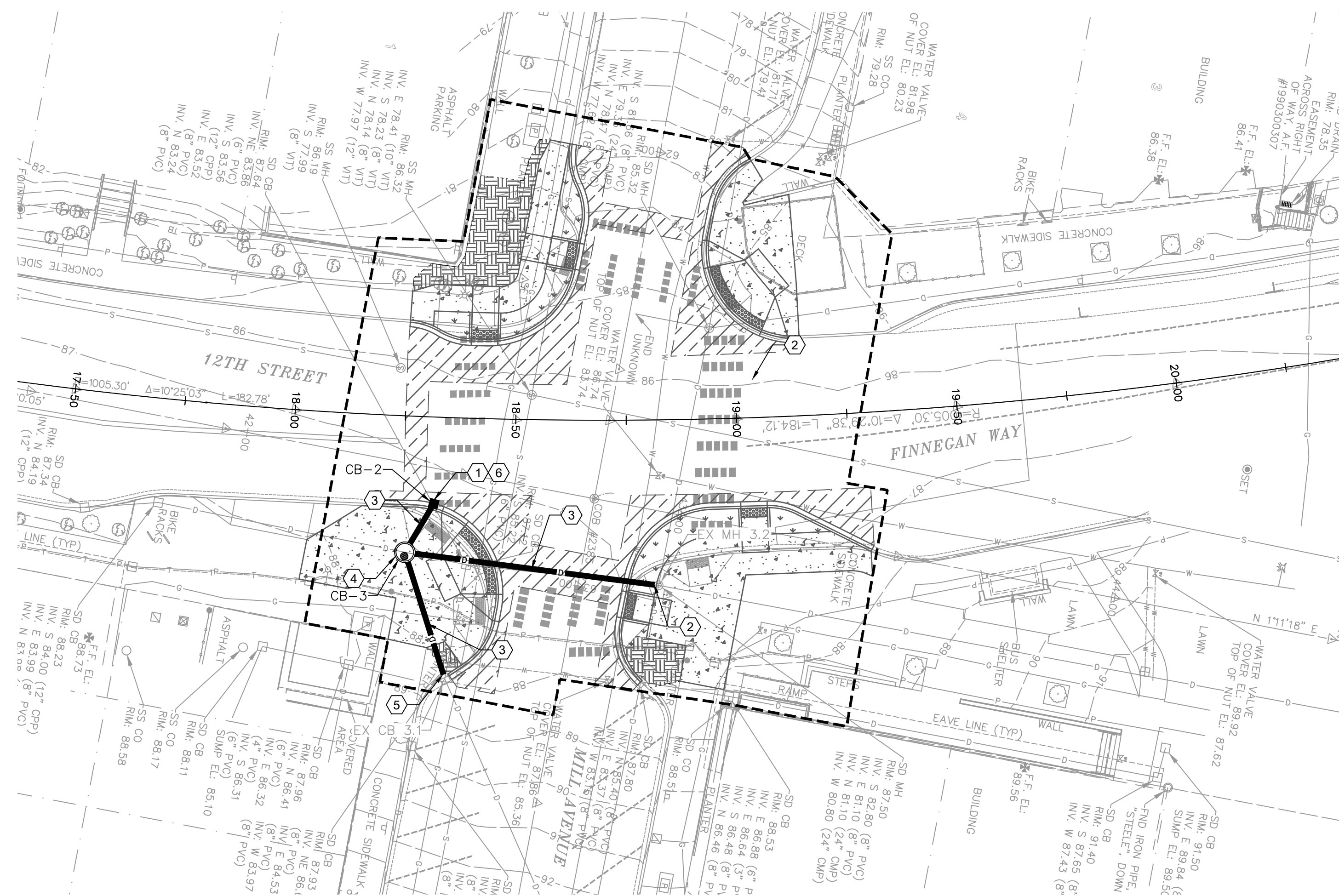
DATUM
NAD 83/98
NAVD 88

Job. No. ES-566
Date 10/4/2024
Field Bk.

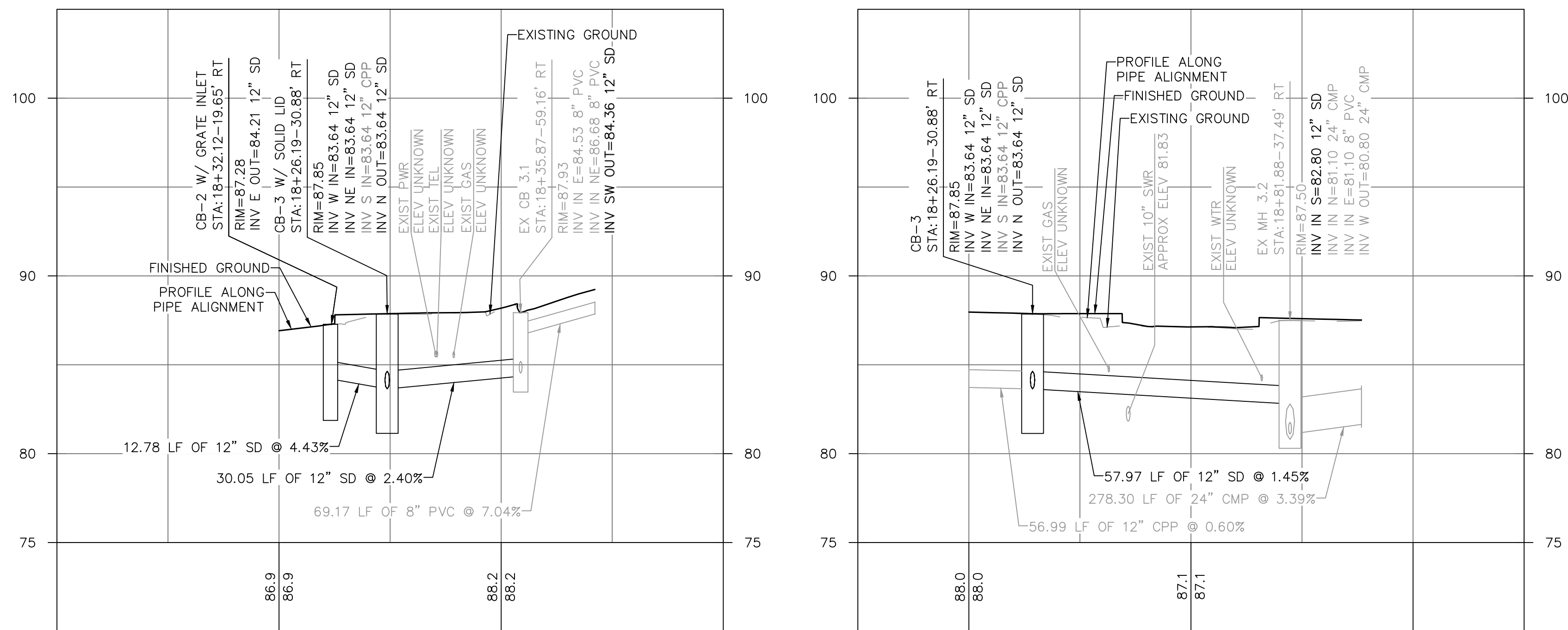
12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DRAINAGE PLAN AND PROFILE

SHEET 33 OF 51

SEC. 01, T. 37 N., R. 02 E., W.M.



PLAN VIEW - 12TH ST & MILL AVE



PROFILE VIEWS

NOTES

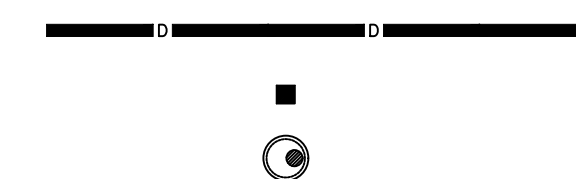
- SEE INDEX OF SHEETS TO REFERENCE GENERAL NOTES, TESC NOTES, LEGEND, DEMOLITION, TYPICAL SECTIONS, PAVING, AND DETAILS.

CONSTRUCTION NOTES

- INSTALL TYPE 1 CATCH BASIN PER WSDOT STANDARD PLAN B-5.20-03. INSTALL ADA GRATE AND FRAME PER WSDOT STANDARD PLANS B-30.10-03. AND B-30.15-00.
- CORE DRILL FOR CONNECTION TO EXISTING CATCH BASIN.
- INSTALL STORM DRAIN AND BEDDING PER COB STANDARD PLAN DR-538.
- INSTALL TYPE 2 CATCH BASIN PER WSDOT STANDARD PLAN B-10.20-03 WITH SOLID RING AND COVER PER COB STANDARD PLAN SS-704 WITH LETTERING OF DRAIN.
- CONNECT TO EXISTING STRUCTURE.
- INSTALL TYPE 60 B-1 OUTLET TRAP PER COB STANDARD PLAN DR-515.

LEGEND

- STORM DRAINAGE PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2

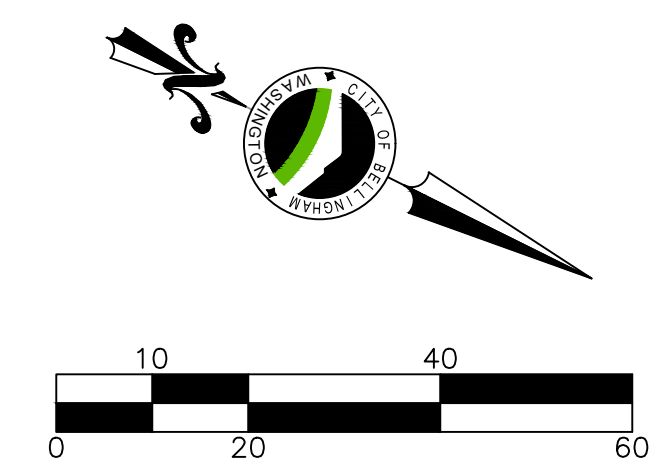


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CITY ENGINEER CMAS
ASSISTANT DIRECTOR MAO

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

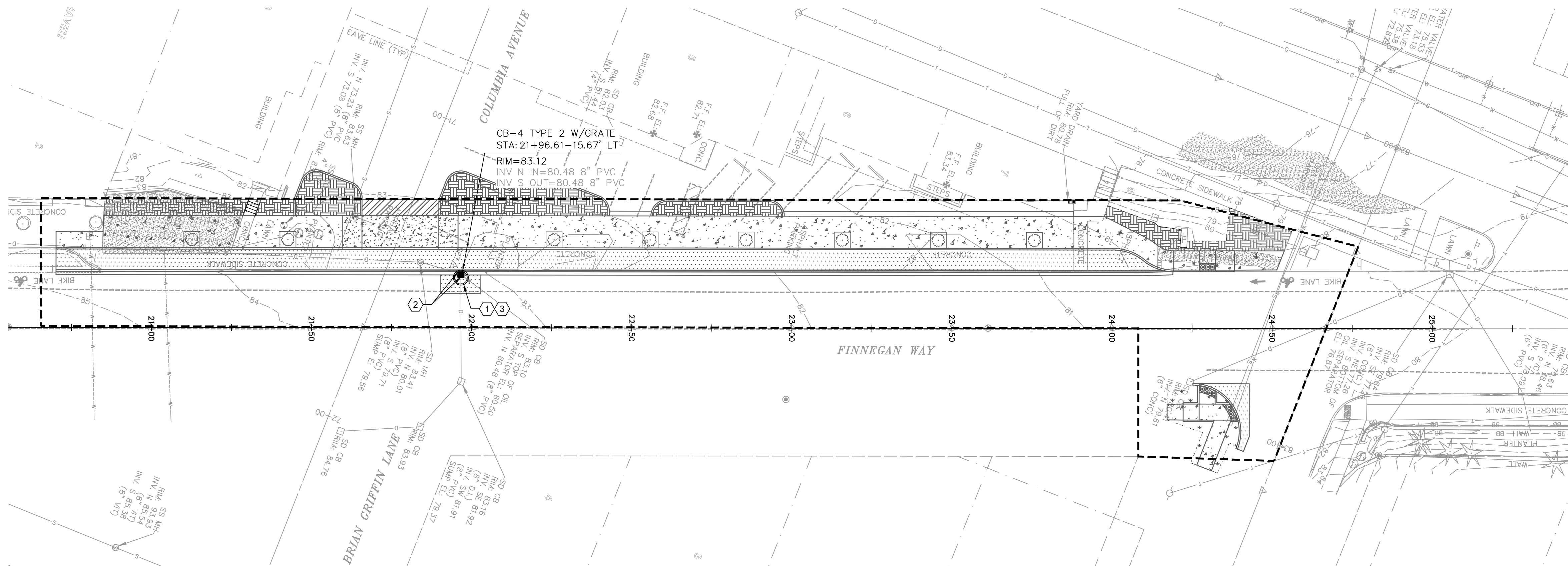
SCALE
Horiz. 1"=20'
Vert. 1"=5'

DATUM
NAD 83/98
NAVD 88

Job. No. ES-566
Date 10/4/2024
Field Bk.

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DRAINAGE PLAN AND PROFILE

SHEET 34 OF 51



PLAN VIEW - FINNEGAN WAY

NOTES

- SEE INDEX OF SHEETS TO REFERENCE GENERAL NOTES, TESC NOTES, LEGEND, DEMOLITION, TYPICAL SECTIONS, PAVING, AND DETAILS.

CONSTRUCTION NOTES

- REPLACE EXISTING CATCH BASIN AND GRATE WITH CB-4. CONSTRUCT CB-4, TYPE 2 CATCH BASIN WITH RECTANGULAR VANED GRATE AND FRAME PER WSDOT STANDARD PLANS B-10.20-03, B-30.10-03, AND B-30.30-03.
- CONNECT EXISTING PIPES TO CB-4.
- INSTALL TYPE 60 B-1 OUTLET TRAP PER COB STANDARD PLAN DR-515.

LEGEND

- STORM DRAINAGE PIPE
- CATCH BASIN TYPE 2



10/22/2024

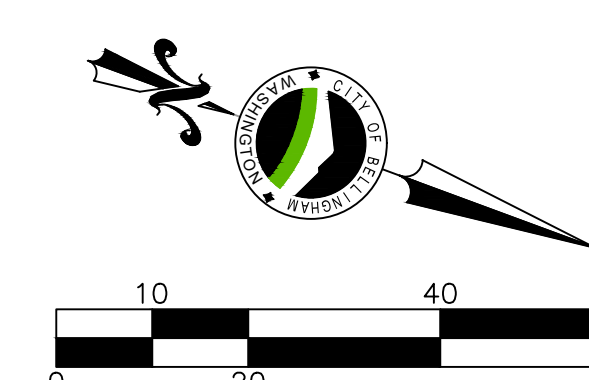


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CITY ENGINEER CMAS
ASSISTANT DIRECTOR MAO

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"=20'
Vert. 1"=5'

DATUM
NAD 83/98
NAVD 88

Job. No. ES-566
Date 10/4/2024
Field Bk.

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DRAINAGE PLAN AND PROFILE

SHEET 35 OF 51

BEDDING SPECIFICATIONS FOR PVC PIPE

THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION:

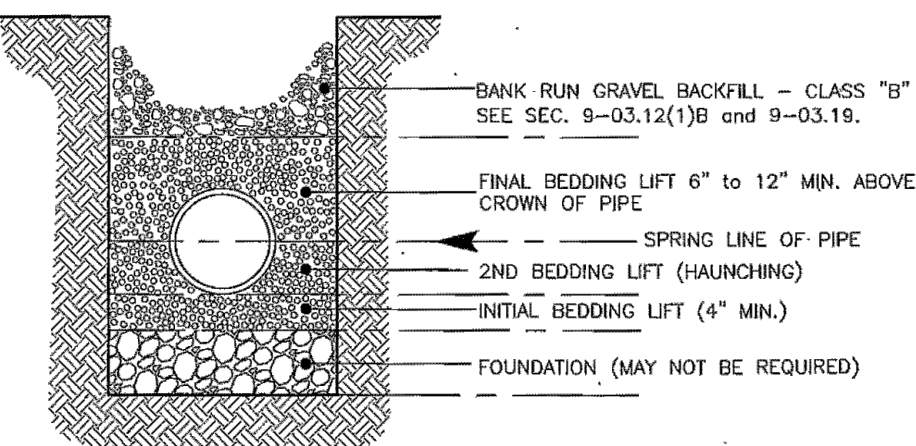
BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE-

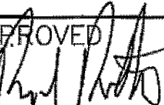
BEDDING MATERIAL FOR PVC PIPE SHALL BE PEA GRAVEL CONFORMING TO THE FOLLOWING SPECIFICATIONS.

PEA GRAVEL - PEA GRAVEL BEDDING SHALL BE A CLEAN MIXTURE FREE FROM ORGANIC MATTER AND CONFORMING TO THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM D422:

U.S. STANDARD SIEVE SIZE	PERCENT PASSING, BY WT.
3/4"	100
3/8"	95-100
#8	0-10
#200	0-3

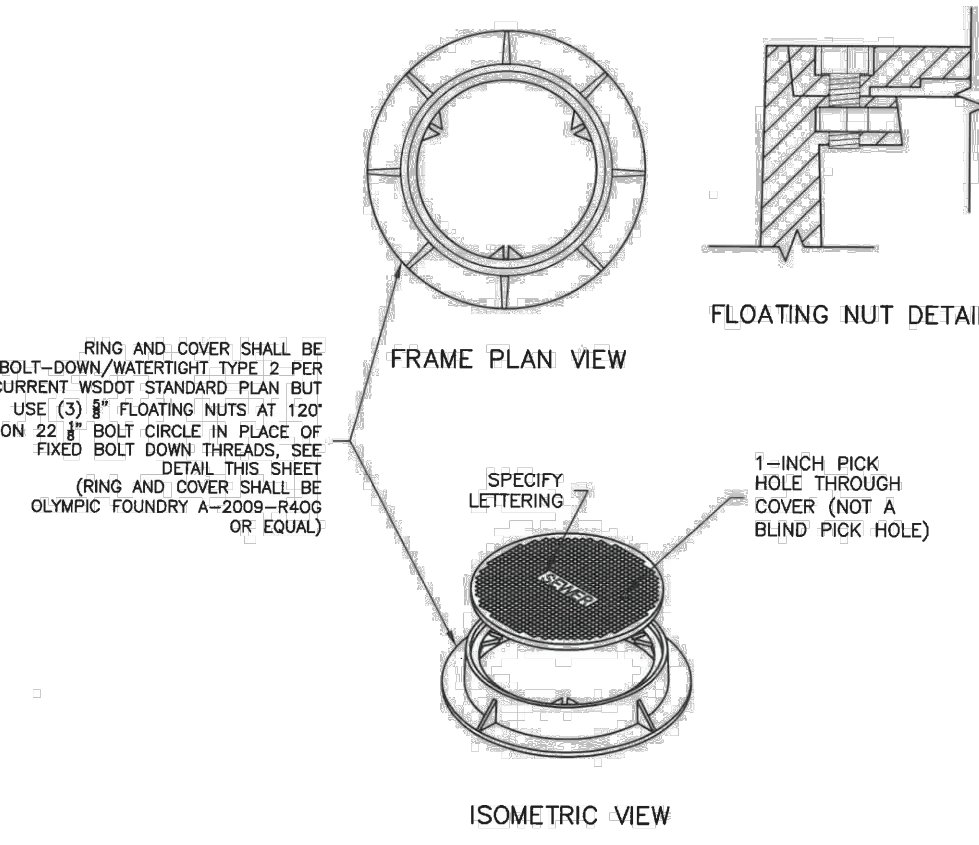
BACKFILL - WHEREVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% OF MAXIMUM DENSITY.



APPROVED: 
City Engineer

CITY OF BELLINGHAM
PVC PIPE BEDDING
DETAILS


DRAWING
DR-538



RING AND COVER SHALL BE BOLT-DOWN/WATER TIGHT TYPE 2 PER CURRENT WSDOT STANDARD PLAN BUT USE (3) 8" FLOATING NUTS AT 120° ON 22" BOLT CIRCLE IN PLACE OF FIXED BOLT THREADS. SEE DETAIL THIS SHEET. RING AND COVER SHALL BE OLYMPIC FOUNDRY A-0000-0400 (OR EQUAL).

NOTES:

- FRAME SHALL NOT BE THREADED AND INSTEAD PROVIDE A FLOATING AND REMOVABLE SQUARE NUT SECURED TO THE BOTTOM OF THE RING/FRAME THAT CAN BE REPLACED IF THE THREADS ARE STRIPPED IN THE FUTURE. NUT SHALL BE SQUARE AND IN A CHANNEL TO PREVENT ROTATION DURING TIGHTENING OF THE BOLT.
- SEWER FRAMES AND COVERS SHALL BE BOLT-DOWN / WATER TIGHT PER THE CURRENT WSDOT STANDARD PLAN FOR CIRCULAR FRAME (RING) AND COVER WITH REVISIONS AS INDICATED ON THIS STANDARD PLAN.

APPROVED: 
City Engineer

CITY OF BELLINGHAM
STANDARD MANHOLE
RING AND COVER

DRAWING
SS-704

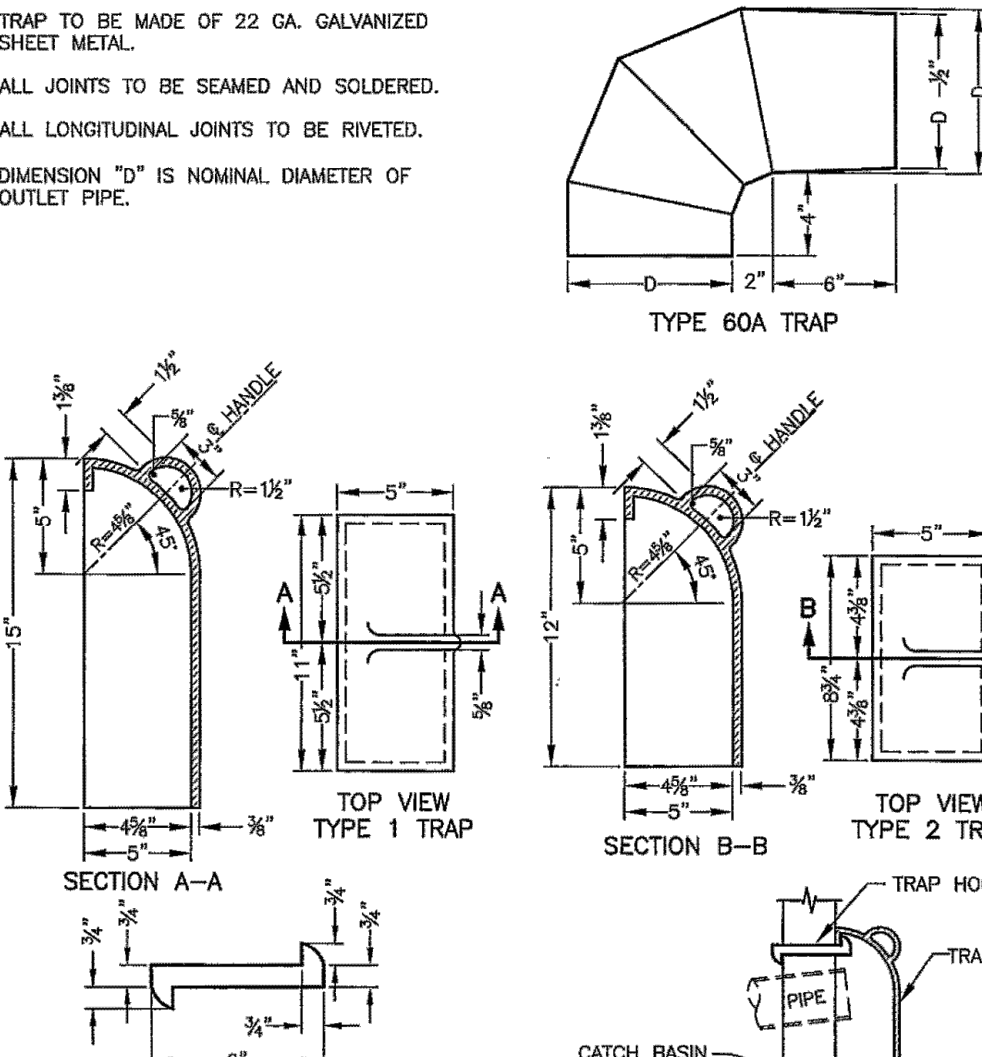
NOTE:

TRAP TO BE MADE OF 22 GA. GALVANIZED SHEET METAL.

ALL JOINTS TO BE SEAMED AND SOLDERED.

ALL LONGITUDINAL JOINTS TO BE RIVETED.

DIMENSION "D" IS NOMINAL DIAMETER OF OUTLET PIPE.

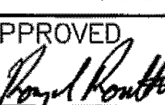


TRAP HOOKS MAY BE ROUND OR SQUARE IN CROSS-SECTION.

TYPE 60B-1 TRAP TO BE USED WITH 8" ID OUTLET PIPE.

TYPE 60B-2 TRAP TO BE USED WITH 4" OR 6" ID OUTLET PIPE.

TRAP MAY BE CAST IRON ASTM DESIGNATION A48 CLASS 25 OR CAST STEEL ASTM DESIGNATION A27 GRADE 70-36.

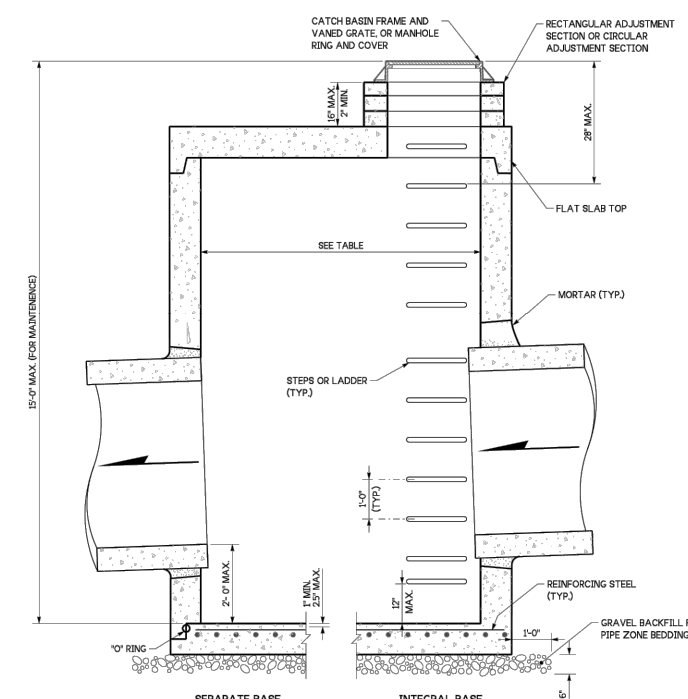
APPROVED: 
City Engineer

CITY OF BELLINGHAM
TYPE 60A AND TYPE 60B
OUTLET TRAP

DRAWING
DR-515


NOTES:

- No steps are required when height is 4' or less.
- The bottom of the precast catch basin may be sloped to facilitate cleaning.
- The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
- Knockouts shall have a wall thickness of 2" (n) minimum to 25" (n) maximum. Provide a 15" (n) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- Pipe allowances will vary depending on the pipe material used. Contact the Region Hydraulic Engineer for assistance.



CATCH BASIN MATERIAL	MIN. HEIGHT	MIN. WIDTH	MIN. DEPTH	MIN. GRATE	MIN. FRAME
CAST IRON	4'	4'	4'	4'	4'
PRECAST CONCRETE	4'	4'	4'	4'	4'
PRECAST POLYMER CONCRETE	4'	4'	4'	4'	4'

CATCH BASIN MATERIAL	PIPE MATERIAL	MIN. ALLOWANCE	MAX. ALLOWANCE
CAST IRON	CAST IRON	1/2"	1/2"
	PRECAST CONCRETE	1/2"	1/2"
PRECAST CONCRETE	CAST IRON	1/2"	1/2"
	PRECAST CONCRETE	1/2"	1/2"
PRECAST POLYMER CONCRETE	CAST IRON	1/2"	1/2"
	PRECAST CONCRETE	1/2"	1/2"

APPROVED: 
City Engineer

CITY OF BELLINGHAM
STANDARD PLAN B-10-20-03

DRAWING
SHEET 1 OF 1 SHEET

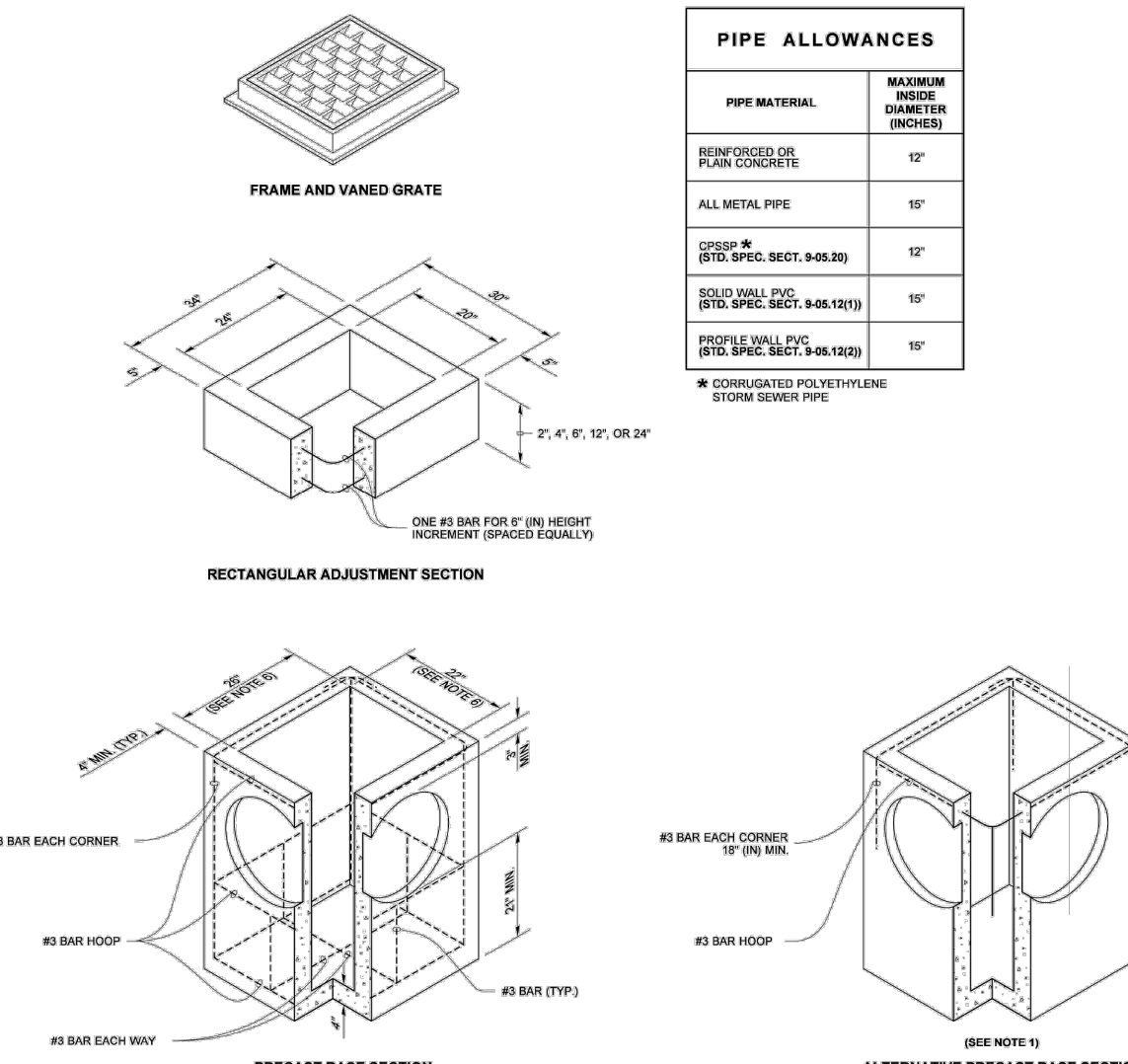
PIPE ALLOWANCES


PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	12"
CLAY PIPE (STD. SPEC. SECT. 9-03.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-04.10(1))	12"
FRIBRE WALL PVC (STD. SPEC. SECT. 9-04.10(2))	12"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES:

- As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, floors (placed according to the Standard Specifications), or wire mesh having a minimum area of 1/2 square inches per foot shall be used with the maximum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 20" (n). Knockouts shall have a wall thickness of 2" (n) minimum to 2.5" (n) maximum. Provide a 1.5" (n) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5' (n).
- The frames and grates may be installed with the flange up, or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
- The opening shall be measured at the top of the Precast Base Section.
- All pickup holes shall be grouted full after the basin has been placed.



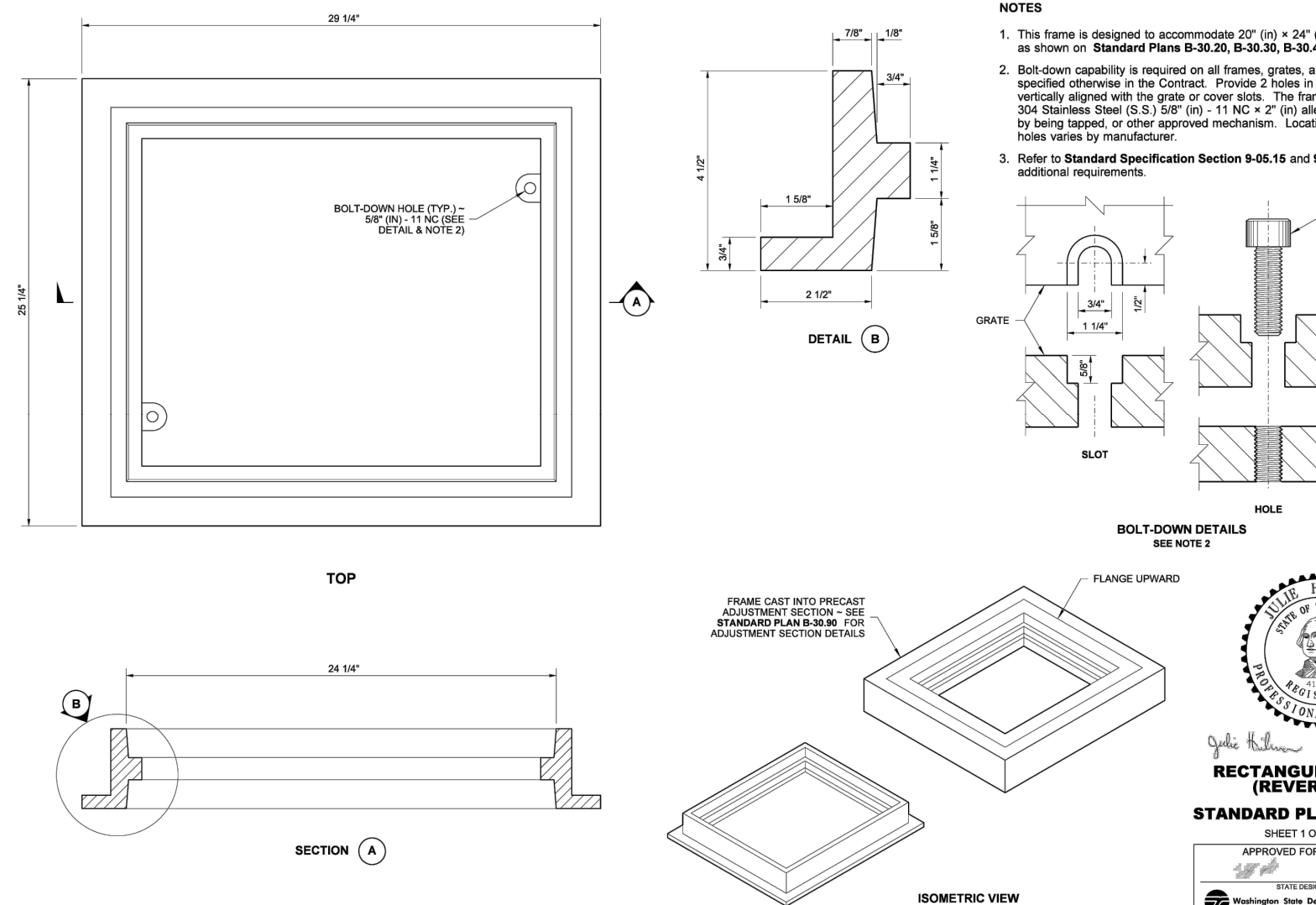
APPROVED FOR PUBLICATION: 
Roark, Steve


CITY OF BELLINGHAM
STANDARD PLAN B-5-20-03

DRAWING
SHEET 1 OF 1 SHEET

NOTES:

- This frame is designed to accommodate 20" (n) x 24" (n) grates or covers as shown on Standard Plans B-30-20, B-30-24, B-30-30, and B-30-36.
- Ball-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (n) x 11" NC x 2" (n) Allen head cap screw by being tapped, or other approved mechanism. Location of ball-down holes varies by manufacturer.
- Refer to Standard Specification Section 9-05.15 and 9-05.15(2) for additional requirements.



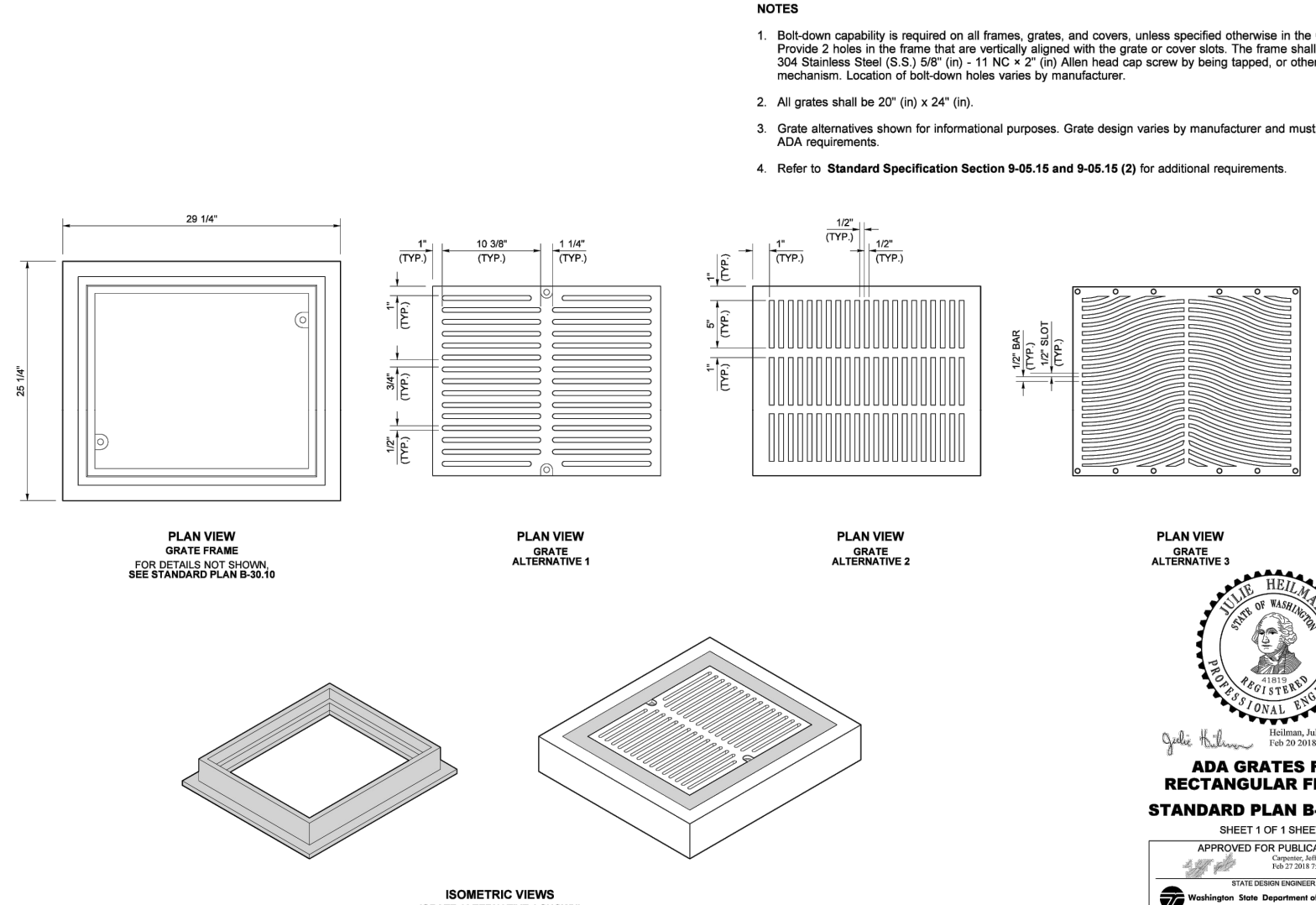
APPROVED FOR PUBLICATION: 
Roark, Steve


CITY OF BELLINGHAM
STANDARD PLAN B-30-10-03

DRAWING
SHEET 1 OF 1 SHEET

NOTES:

- Ball-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (n) x 11" NC x 2" (n) Allen head cap screw by being tapped, or other approved mechanism. Location of ball-down holes varies by manufacturer.
- All grates shall be 20" (n) x 24" (n).
- Grate alternatives shown for informational purposes. Grate design varies by manufacturer and must meet ADA requirements.
- Refer to Standard Specification Section 9-05.15 and 9-05.15 (2) for additional requirements.



APPROVED FOR PUBLICATION: 
Roark, Steve

CITY OF BELLINGHAM
STANDARD PLAN B-30-15-00

DRAWING
SHEET 1 OF 1 SHEET

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ASSISTANT DIRECTOR MAO

CITY OF BELLINGHAM, WASHINGTON
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SCALE
Horiz. 1"=20'
Vert. 1"=5'

DATUM
NAD 83/98
NAVD 88

Job No. ES-566
Date 10/4/2024
Field Bk.



12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
DRAINAGE DETAILS

SHEET 36 OF 51

transpogroup **7T**
WHAT TRANSPORTATION CAN BE.

12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034

(TEL) 425 821-3665
(FAX) 425 825-8434

Osborn
Consulting

DRD01

SEC. 01, T. 37 N., R. 02 E., W.M.

SIGN INSTALLATION SPECIFICATIONS (THIS SHEET)

SIGN #	CODE	ALIGNMENT	STATION	OFFSET	SIZE	DESCRIPTION	NOTES
1	W11-2	12TH ST	12+64.7	27.2FT LT	30" X 30"	PEDESTRIAN	SEE SHEET EL02 FOR RRFB ASSEMBLY.
2	W16-7PL				21" X 16"	DIAGONAL ARROW	
3	W11-2				30" X 30"	PEDESTRIAN	
4	W16-7PR				21" X 16"	DIAGONAL ARROW	
5	W11-2	12TH ST	12+58.2	23.8FT RT	30" X 30"	PEDESTRIAN	
6	W16-7PL				21" X 16"	DIAGONAL ARROW	
7	W11-2				30" X 30"	PEDESTRIAN	
8	W16-7PR				21" X 16"	DIAGONAL ARROW	
R1	W11-2	12TH ST	12+53.1	19.8FT RT	EX	PEDESTRIAN	
R2	W16-7PL				EX	DIAGONAL ARROW	
EX1	W11-2	12TH ST	13+48.3	27.8FT LT	EX	PEDESTRIAN	
EX2	W16-7PL				EX	DIAGONAL ARROW	
EX3	W11-2	12TH ST	13+36.5	39.6FT RT	EX	PEDESTRIAN	
EX4	W16-7PL				EX	DIAGONAL ARROW	

SIGNING & CHANNELIZATION NOTES

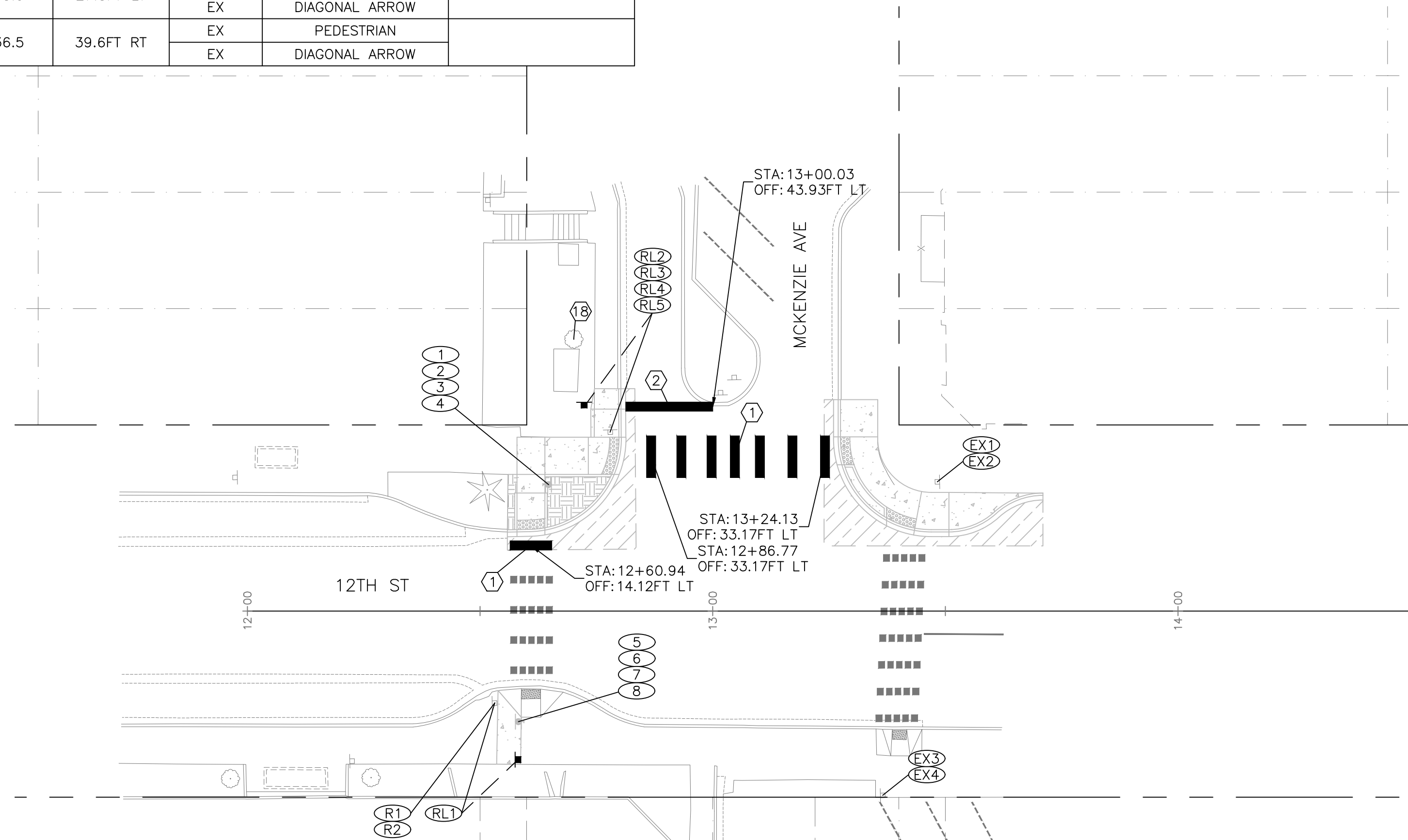
- THE CONTRACTOR SHALL SALVAGE & DELIVER ALL EXISTING SIGNING EQUIPMENT SPECIFIED FOR REMOVAL BACK TO THE CITY OF BELLINGHAM.

CHANNELIZATION CONSTRUCTION NOTES

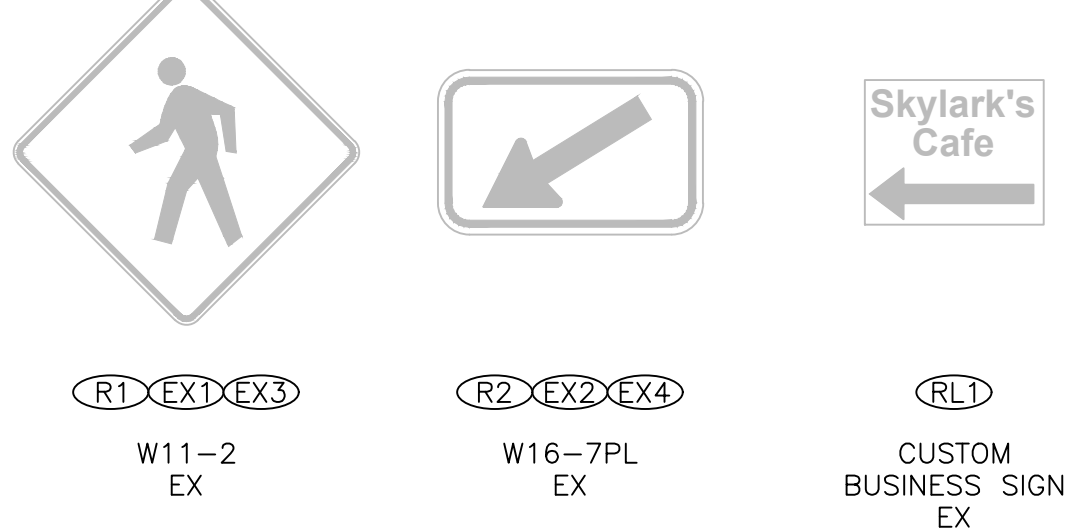
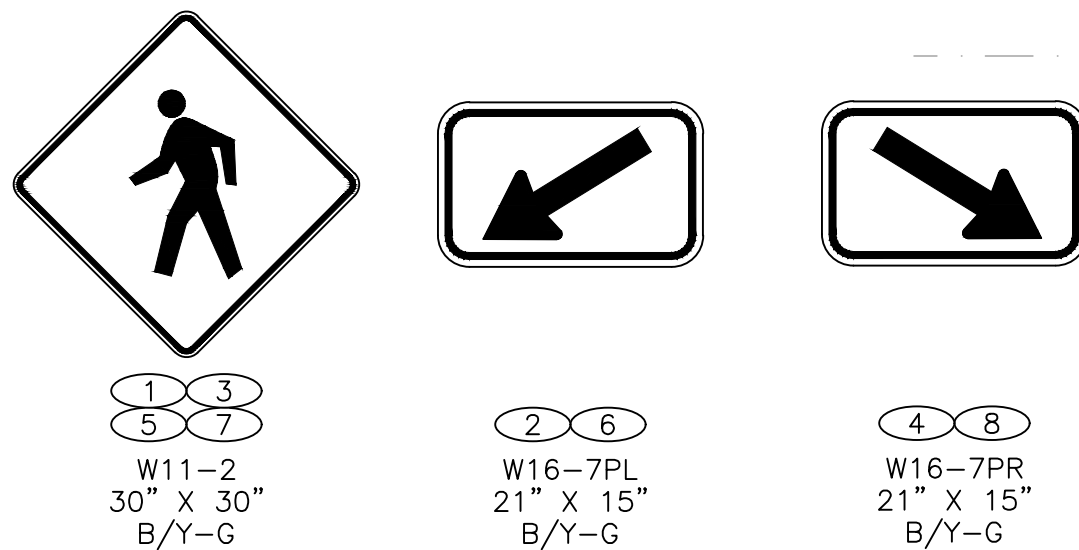
- INSTALL WHITE THERMOPLASTIC CONTINENTAL CROSSWALK PER CITY OF BELLINGHAM STANDARD DRAWING TC-310.
- INSTALL WHITE THERMOPLASTIC STOP BAR PER CITY OF BELLINGHAM STANDARD DRAWING TC-310.
- TRIM TREE IN FRONT OF NEW SIGN.

CHANNELIZATION LEGEND

EXISTING ROW	---
CONSTRUCTION NOTE	(#)
REMOVE SIGN NOTE	(R#)
RELOCATE SIGN NOTE	(RL#)
PROPOSED SIGN NOTE	(#)
EXISTING SIGN NOTE	(EX#)
PROPOSED SIGN	■
EXISTING SIGN	▬

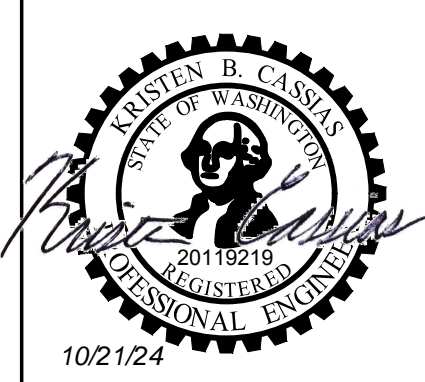


SIGN LEGEND (THIS SHEET)

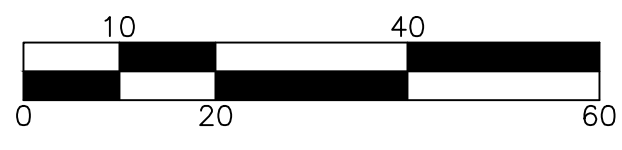


SIGN RELOCATION SPECIFICATIONS (THIS SHEET)

SIGN #	CODE	ALIGNMENT	EXISTING		PROPOSED		SIZE	DESCRIPTION	NOTES
			STATION	OFFSET	STATION	OFFSET			
RL1	CUSTOM	12TH ST	12+53.1	19.8FT RT	12+58.2	31.9FT RT	EX	BUSINESS SIGN	RELOCATE EXISTING SIGN POST, BASE PIECE, AND SIGN.
RL2	R1-1	12TH ST	12+78.0	38.4FT LT	12+72.4	44.2FT LT	EX	STOP	RELOCATE EXISTING SIGN POST, BASE PIECE, AND SIGN.
RL3	R5-1						EX	DO NOT ENTER	
RL4	D3-1						EX	12TH ST	
RL5	D3-1						EX	MCKENZIE AVE	



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two business days
before you dig

CH01

4			
3			
2			
1			
Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
CHANNELIZATION AND SIGNING PLAN

SHEET
37 OF
51

SIGN INSTALLATION SPECIFICATIONS (THIS SHEET)

SIGN #	CODE	ALIGNMENT	STATION	OFFSET	SIZE	DESCRIPTION	NOTES
R1	R1-1	12TH ST	18+51.2	36.4FT LT	EX	STOP	
R2	D3-101				EX	12TH ST	
R3	D3-101				EX	MILL ST	
R4	R1-1	12TH ST	18+78.0	55.0FT RT	EX	STOP	
EX1	CUSTOM	12TH ST	17+42.6	30.9FT LT	EX	BUSINESS SIGN	
EX2	CUSTOM	12TH ST	17+83.6	28.8FT LT	EX	BUS STOP	
EX3	CUSTOM	12TH ST	18+35.5	38.4FT LT	EX	BUSINESS SIGN	
EX4	CUSTOM	MILL AVE	61+70.2	29.0FT RT	EX	BUSINESS SIGN	
EX5	CUSTOM	MILL AVE	61+54.6	33.5FT LT	EX	PAY TO PARK	
EX6	R7-6(MOD)	FINNEGAN WAY	19+80.9	25.6FT LT	EX	NO PARKING	
EX7	R7-201				EX	TOW AWAY ZONE	
EX8	CUSTOM	FINNEGAN WAY	20+46.0	26.3FT LT	EX	PAY TO PARK	
EX9	CUSTOM	FINNEGAN WAY	19+53.0	38.9FT RT	EX	BUS STOP	
EX10	CUSTOM	MILL AVE	63+43.0	28.8FT LT	EX	PAY TO PARK	
EX11	CUSTOM	MILL AVE	63+95.1	26.4FT LT	EX	PAY TO PARK	
EX12	CUSTOM	MILL AVE	64+00.2	32.9FT RT	EX	PAY TO PARK	
EX13	CUSTOM	MILL AVE	63+62.1	32.8FT RT	EX	PAY TO PARK	

SIGNING & CHANNELIZATION NOTES

- SEE SHEET CH01 FOR CHANNELIZATION AND SIGNING NOTES.

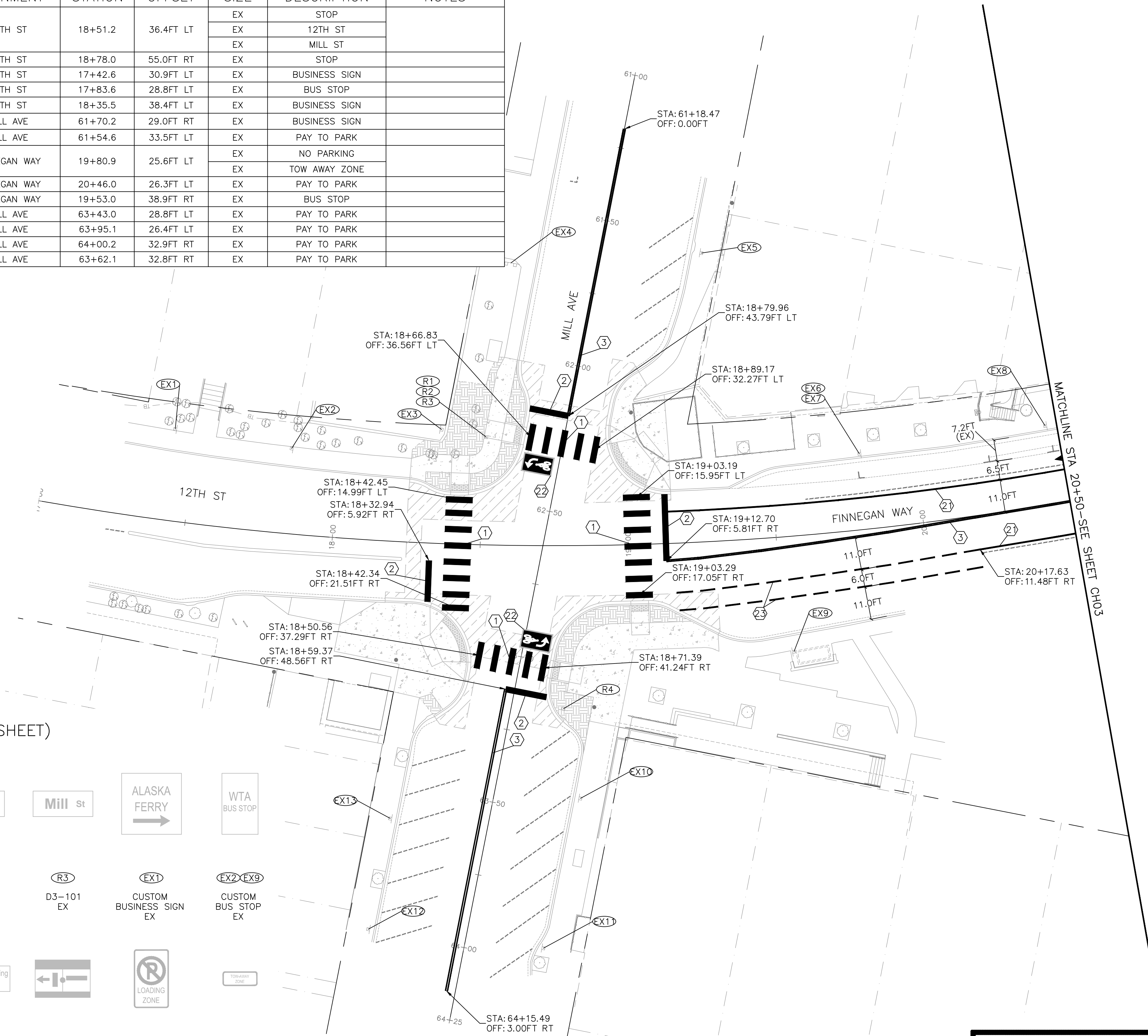
CHANNELIZATION CONSTRUCTION NOTES

- INSTALL WHITE THERMOPLASTIC CONTINENTAL CROSSWALK PER CITY OF BELLINGHAM STANDARD DRAWING TC-310.
- INSTALL WHITE THERMOPLASTIC STOP BAR PER CITY OF BELLINGHAM STANDARD DRAWING TC-310.
- INSTALL DOUBLE YELLOW CENTER STRIPE PER CITY OF BELLINGHAM STANDARD DRAWING TC-305.
- INSTALL 6" SOLID WHITE BICYCLE LANE STRIPE PER CITY OF BELLINGHAM STANDARD DRAWING TC-315.
- INSTALL TWO-STAGE BICYCLE TURN BOX PER DETAIL ON CHD02.
- INSTALL WHITE THERMOPLASTIC DOTTED EXTENSION LINE PER WSDOT STANDARD PLAN M-20.10-04.

CHANNELIZATION LEGEND

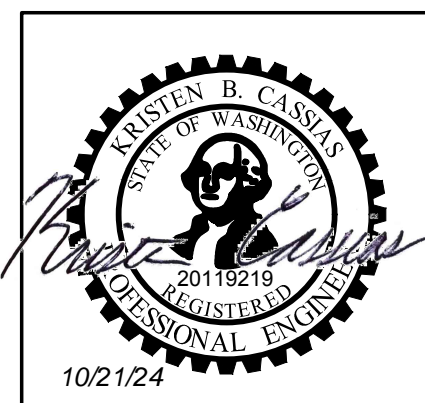
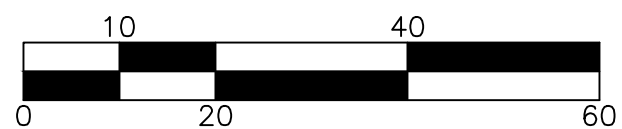
EXISTING ROW	---
CONSTRUCTION NOTE	(#)
REMOVE SIGN NOTE	(R#)
RELOCATE SIGN NOTE	(RL#)
PROPOSED SIGN NOTE	(#)
EXISTING SIGN NOTE	(EX#)
PROPOSED SIGN	■
EXISTING SIGN	□

SIGN LEGEND (THIS SHEET)



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CH02

4			
3			
2			
1			
Date	No	Revision	By

PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
CHANNELIZATION AND SIGNING PLAN

SHEET
38 OF
51

SIGN RELOCATION SPECIFICATIONS (THIS SHEET)

SIGN #	CODE	ALIGNMENT	EXISTING		PROPOSED		SIZE	DESCRIPTION	NOTES
			STATION	OFFSET	STATION	OFFSET			
RL1	W11-2	FINNEGAN WAY	24+14.8	20.1FT LT	N/A*	N/A*	EX	PEDESTRIAN AHEAD	RELOCATE EXISTING SIGN POST, BASE PIECE, AND SIGN.
RL2	W16-9P	FINNEGAN WAY	24+14.8	20.1FT LT	N/A*	N/A*	EX	PEDESTRIAN AHEAD	RELOCATE EXISTING SIGN POST, BASE PIECE, AND SIGN.
RL3	CUSTOM	FINNEGAN WAY	24+14.8	20.1FT LT	22+30.6	27.5FT LT	EX	FAIRHAVEN LIBRARY	RELOCATE EXISTING SIGN TO NEW SIGN POST AND BASE PIECE PER CITY OF BELLINGHAM STANDARD DRAWING TC-320.
RL4	R2-1	FINNEGAN WAY	24+14.0	19.4FT RT	24+95.3	22.2FT RT	EX	SPEED LIMIT 35	RELOCATE EXISTING SIGN POST, BASE PIECE, AND SIGN.
RL5	CUSTOM	FINNEGAN WAY	22+07.4	24.9FT LT	22+21.8	45.3FT LT	EX	BUSINESS SIGN	RELOCATE EXISTING PRIVATE BUSINESS SIGN.

* THIS SIGN'S NORTHING IS 632857.4 AND EASTING IS 1237279.3.

CHANNELIZATION CONSTRUCTION NOTES

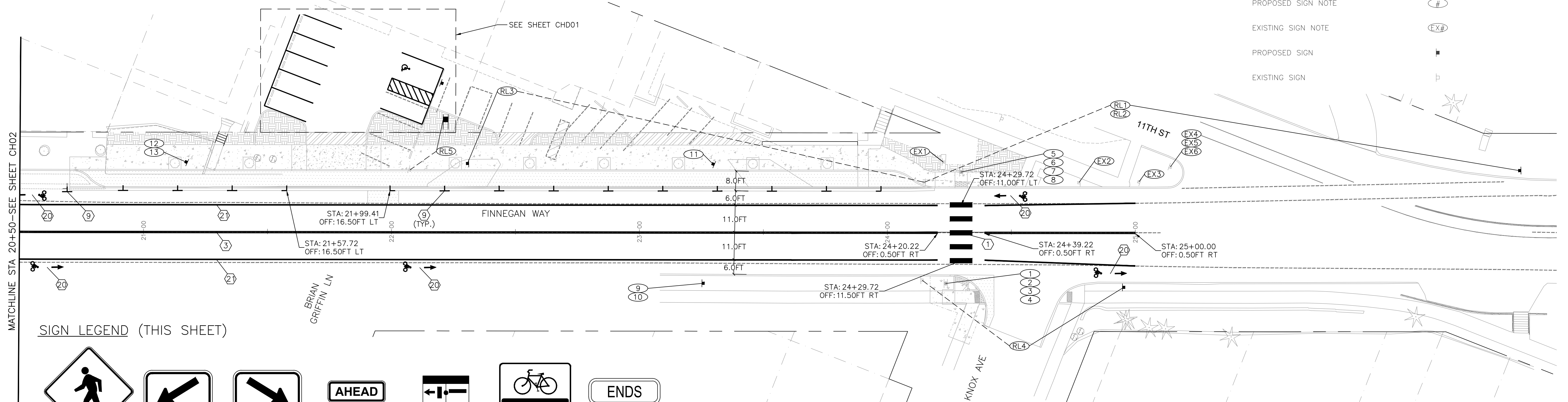
- ① INSTALL WHITE THERMOPLASTIC CONTINENTAL CROSSWALK PER CITY OF BELLINGHAM STANDARD DRAWING TC-310.
- ③ INSTALL DOUBLE YELLOW CENTER STRIPE PER CITY OF BELLINGHAM STANDARD DRAWING TC-305.
- ⑨ INSTALL ON-STREET PARKING PAVEMENT MARKINGS PER DETAIL B, SHEET CHD01.
- ⑳ INSTALL WHITE BICYCLE LANE SYMBOL & ARROW SYMBOL PER CITY OF BELLINGHAM STANDARD DRAWING TC-315.
- ㉑ INSTALL 6" SOLID WHITE BICYCLE LANE STRIPE PER CITY OF BELLINGHAM STANDARD DRAWING TC-315.

SIGNING & CHANNELIZATION NOTES

- 1. SEE SHEET CH01 FOR CHANNELIZATION AND SIGNING NOTES.

CHANNELIZATION LEGEND

EXISTING ROW	---
CONSTRUCTION NOTE	①
REMOVE SIGN NOTE	Ⓡ#
RELOCATE SIGN NOTE	ⓇL#
PROPOSED SIGN NOTE	#
EXISTING SIGN NOTE	Ⓧ#
PROPOSED SIGN	■
EXISTING SIGN	□



SIGN LEGEND (THIS SHEET)

SIGN INSTALLATION SPECIFICATIONS (THIS SHEET)

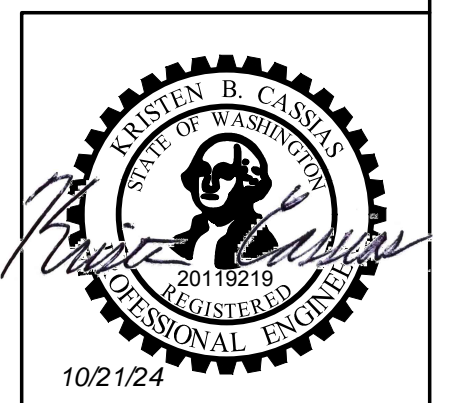
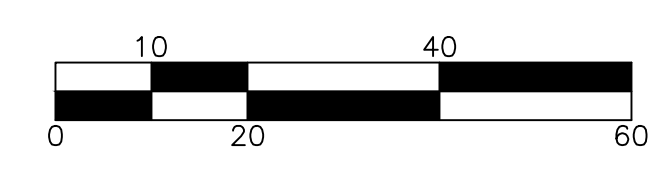
SIGN #	CODE	ALIGNMENT	STATION	OFFSET	SIZE	DESCRIPTION	NOTES
1	W11-2				30" X 30"	PEDESTRIAN	
2	W16-7PL	FINNEGAN WAY	24+23.5	20.7FT RT	21" X 16"	DIAGONAL ARROW	SEE SHEET ELO2 FOR RRFB ASSEMBLY.
3	W11-2				30" X 30"	PEDESTRIAN	
4	W16-7PR				21" X 16"	DIAGONAL ARROW	
5	W11-2				30" X 30"	PEDESTRIAN	
6	W16-7PL	FINNEGAN WAY	24+29.7	24.3FT LT	21" X 16"	DIAGONAL ARROW	SEE SHEET ELO2 FOR RRFB ASSEMBLY.
7	W11-2				30" X 30"	PEDESTRIAN	
8	W16-7PR				21" X 16"	DIAGONAL ARROW	
9	W11-2	FINNEGAN WAY	23+25.7	20.7FT RT	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN POST AND BASE PIECE PER CITY OF BELLINGHAM STANDARD DRAWING TC-320.
10	W16-9P				24" X 12"	AHEAD	
11	CUSTOM	FINNEGAN WAY	23+29.7	27.4FT LT	-	PAY TO PARK	INSTALL NEW SIGN POST AND BASE PIECE PER CITY OF BELLINGHAM STANDARD DRAWING TC-320.
12	R3-17	FINNEGAN WAY	21+17.1	28.0FT LT	24" X 18"	BIKE LANE	
13	R3-17bP				24" X 09"	ENDS	
EX1	CUSTOM	FINNEGAN WAY	24+22.6	28.2FT LT	EX	BUSINESS SIGN	
EX2	CUSTOM	FINNEGAN WAY	24+77.2	20.0FT LT	EX	BUS STOP	
EX3	R3-17	FINNEGAN WAY	N/A*	N/A*	EX	BIKE LANE	
EX4	R1-1				EX	STOP	
EX5	D3-101	FINNEGAN WAY	N/A**	N/A**	EX	11TH ST	
EX6	D3-101				EX	FINNEGAN WAY	

* THIS SIGN'S NORTHING IS 632714.9 AND EASTING IS 1237336.8.

** THIS SIGN'S NORTHING IS 632724.7 AND EASTING IS 1237326.8.

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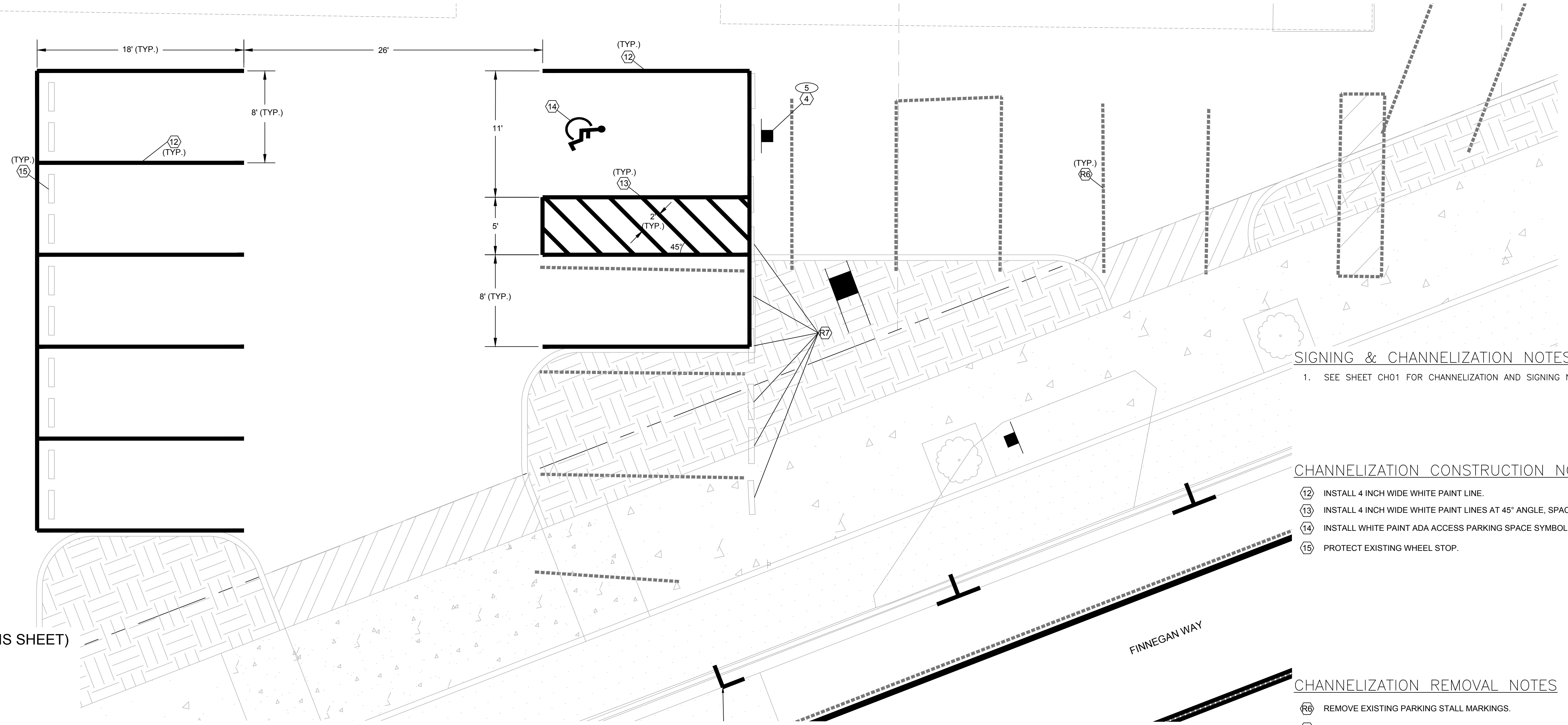


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CH03

4		PROJECT ENGINEER_KBC	DIRECTOR PUBLIC WORKS_M.A.O.	CITY OF BELLINGHAM, WASHINGTON PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SCALE	DATUM	Job. No.	12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS	SHEET 39 OF 51
3		DESIGNED/DRAWN_JK/IN/TK	CITY ENGINEER_M.L.W.		Horiz. AS NOTED	NAD 83/98	Date 8/9/2024	CHANNELIZATION AND SIGNING PLAN	
2		INSPECTOR	ASSISTANT DIRECTOR_M.A.O.		Vert. AS NOTED	NAVD 88	Field Bk.		
Date	No	Revision	By						



SIGNING & CHANNELIZATION NOTES

- 1. SEE SHEET CH01 FOR CHANNELIZATION AND SIGNING NOTES.

CHANNELIZATION CONSTRUCTION NOTES

- (12) INSTALL 4 INCH WIDE WHITE PAINT LINE.
- (13) INSTALL 4 INCH WIDE WHITE PAINT LINES AT 45° ANGLE, SPACED 2 FT APART.
- (14) INSTALL WHITE PAINT ADA ACCESS PARKING SPACE SYMBOL.
- (15) PROTECT EXISTING WHEEL STOP.

CHANNELIZATION REMOVAL NOTES

- (R6) REMOVE EXISTING PARKING STALL MARKINGS.
- (R7) REMOVE EXISTING CONCRETE WHEEL STOP.

SIGN LEGEND (THIS SHEET)



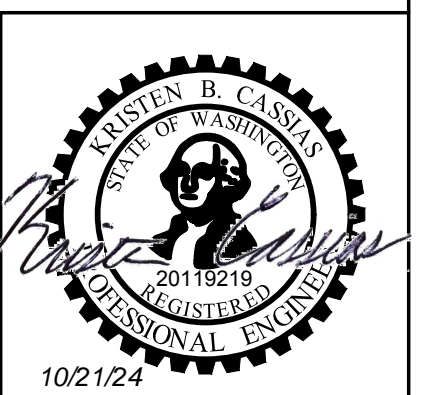
(5)
R7-801
12" X 18"
G/BLW

CHANNELIZATION LEGEND

EXISTING ROW	---
CONSTRUCTION NOTE	(#)
REMOVE SIGN NOTE	(R#)
RELOCATE SIGN NOTE	(RL#)
PROPOSED SIGN NOTE	(#)
EXISTING SIGN NOTE	(EX#)
PROPOSED SIGN	■
EXISTING SIGN	▬

PARKING LOT PAVEMENT MARKINGS AND SIGNS
SCALE 1:5

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CHD01

4			
3			
2			
1			
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PROJECT ENGINEER KBC
DESIGNED/DRAWN JK/IN/TK
INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

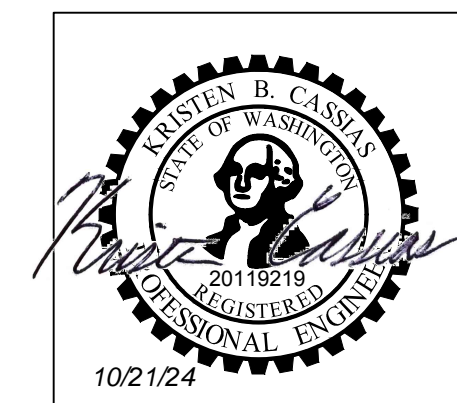
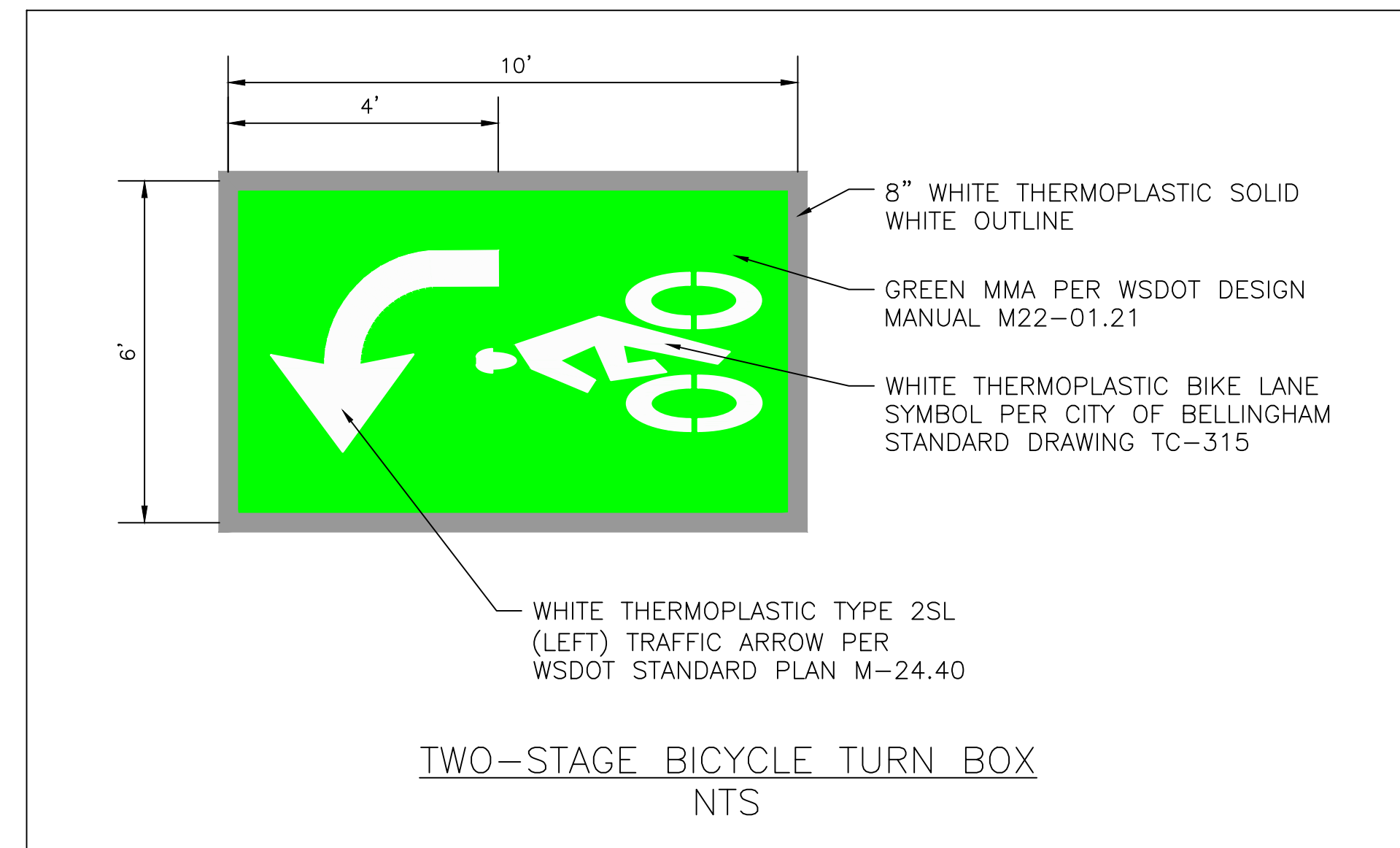
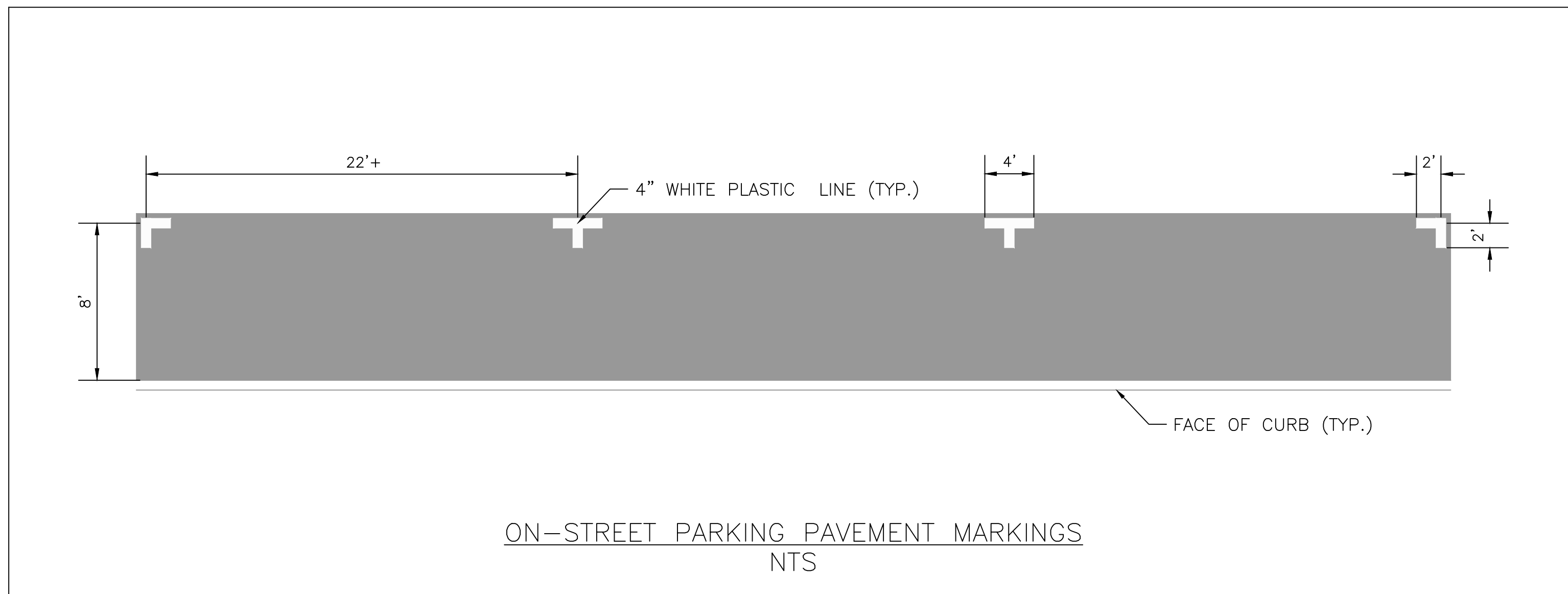
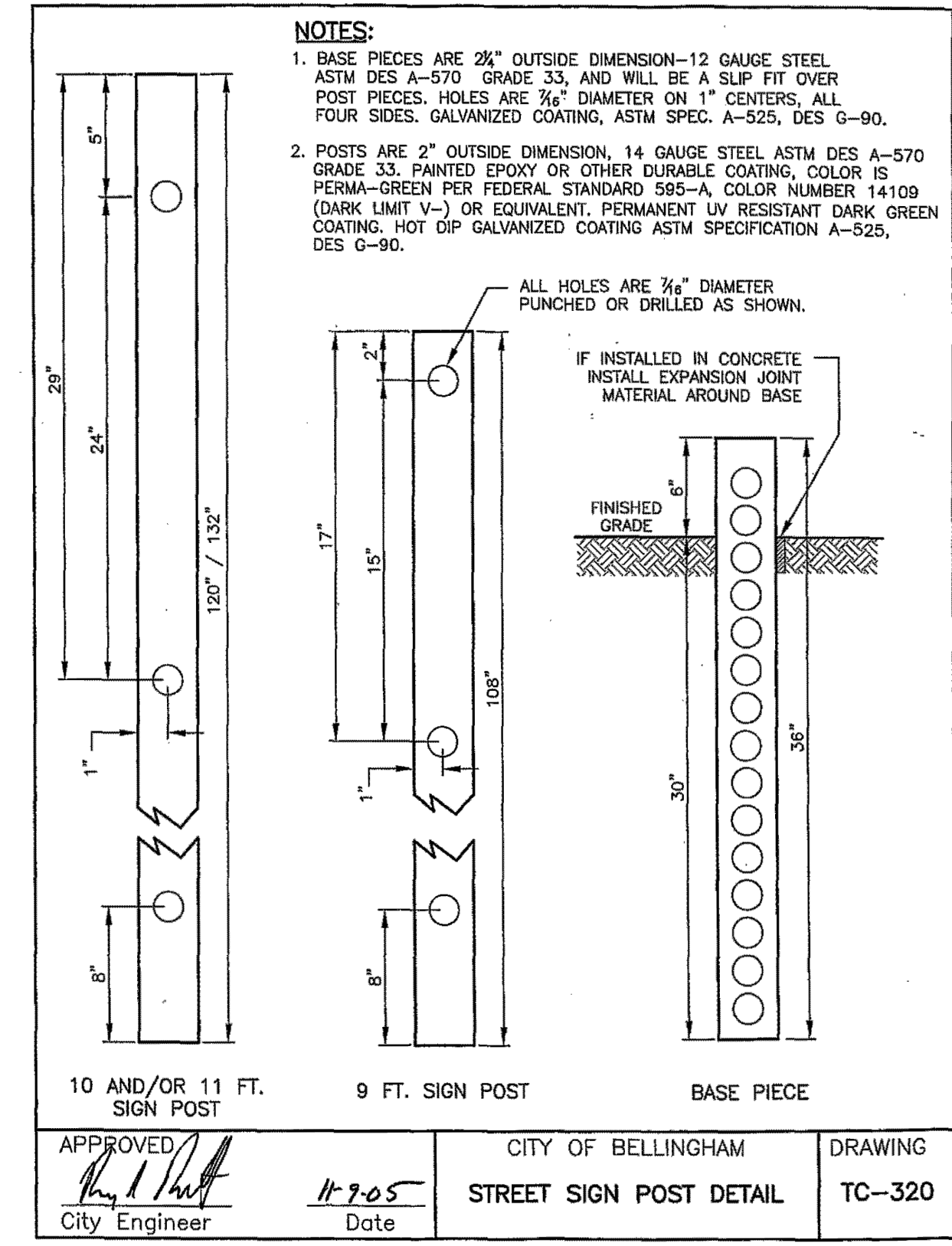
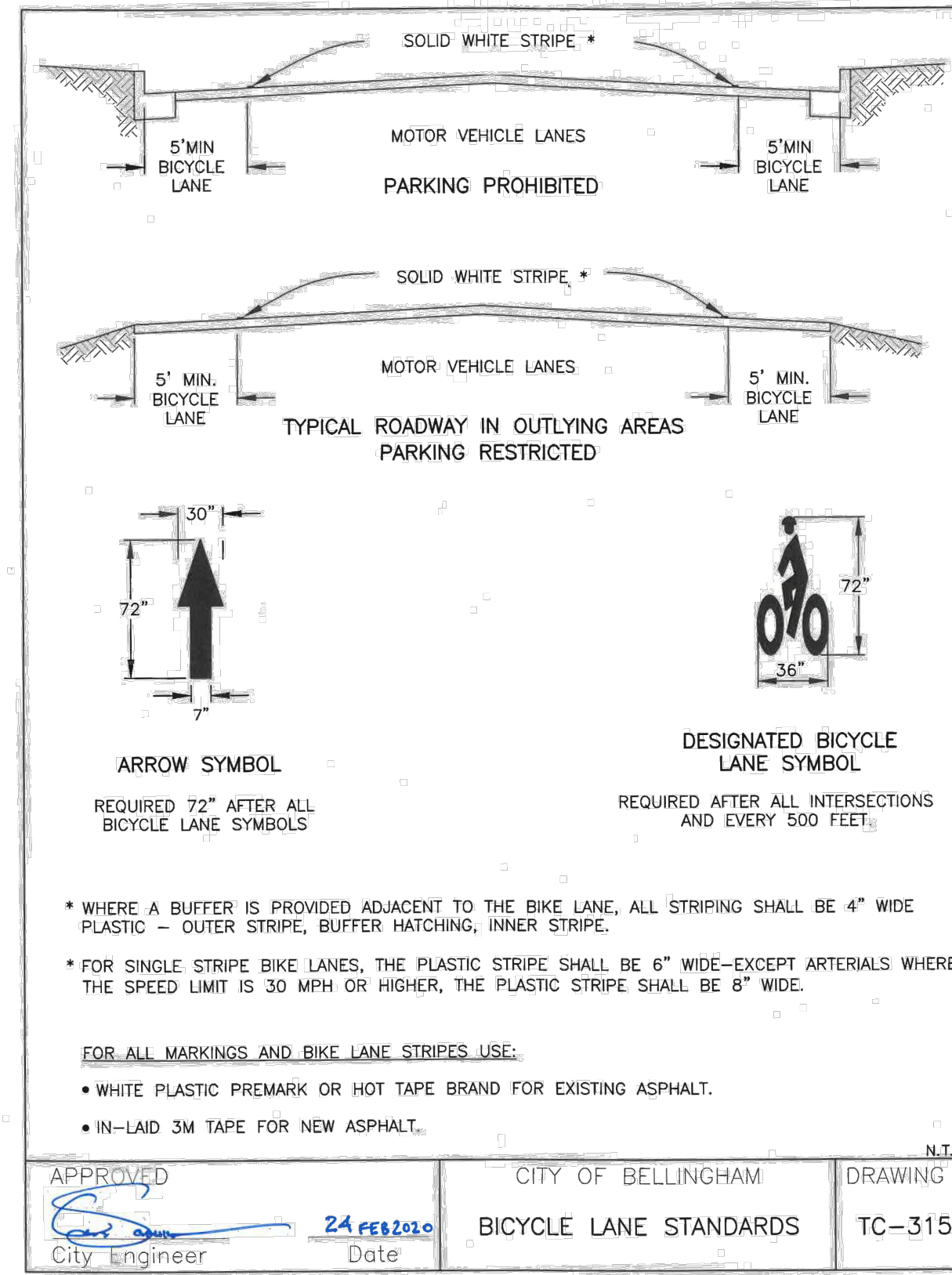
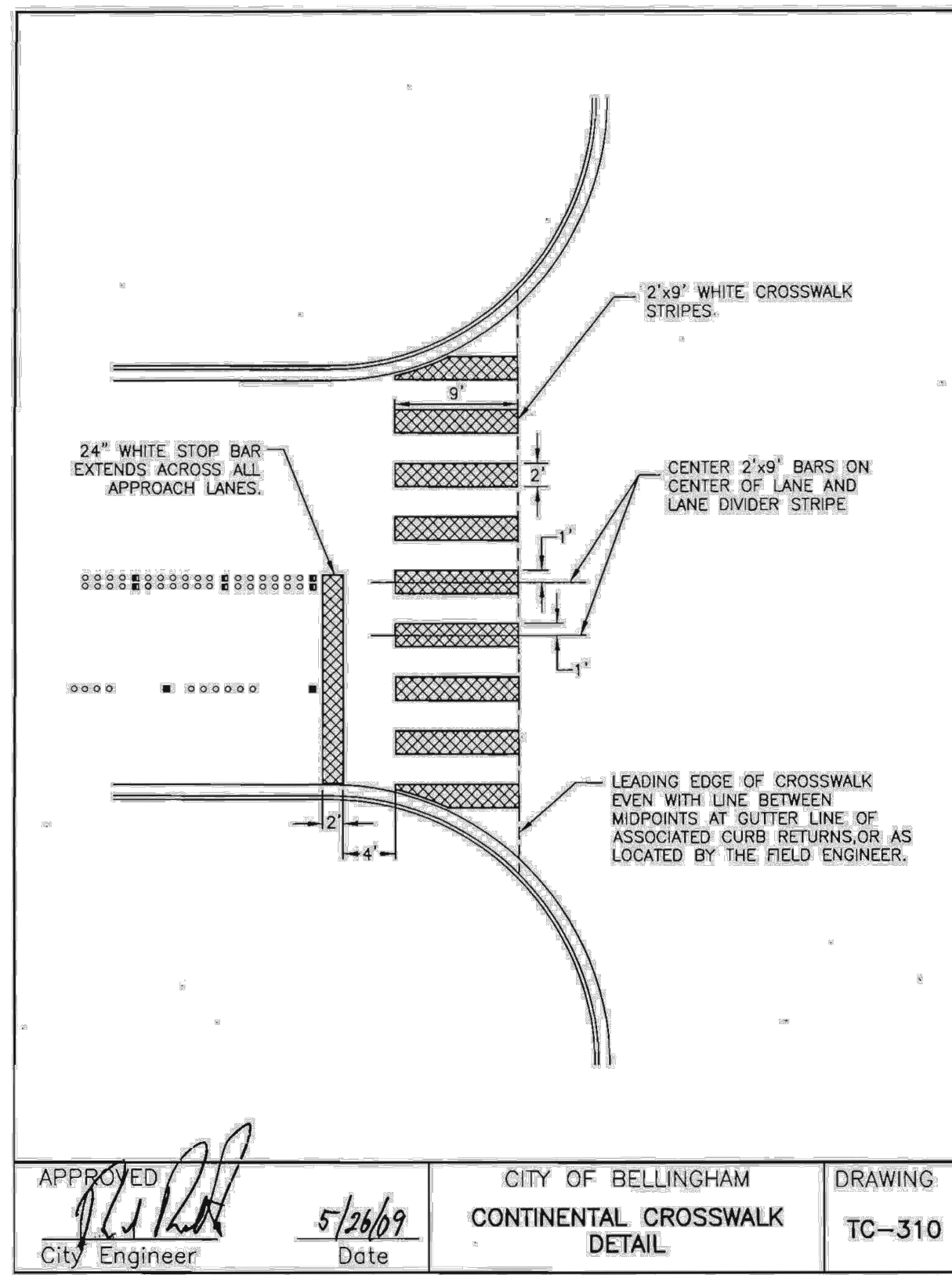
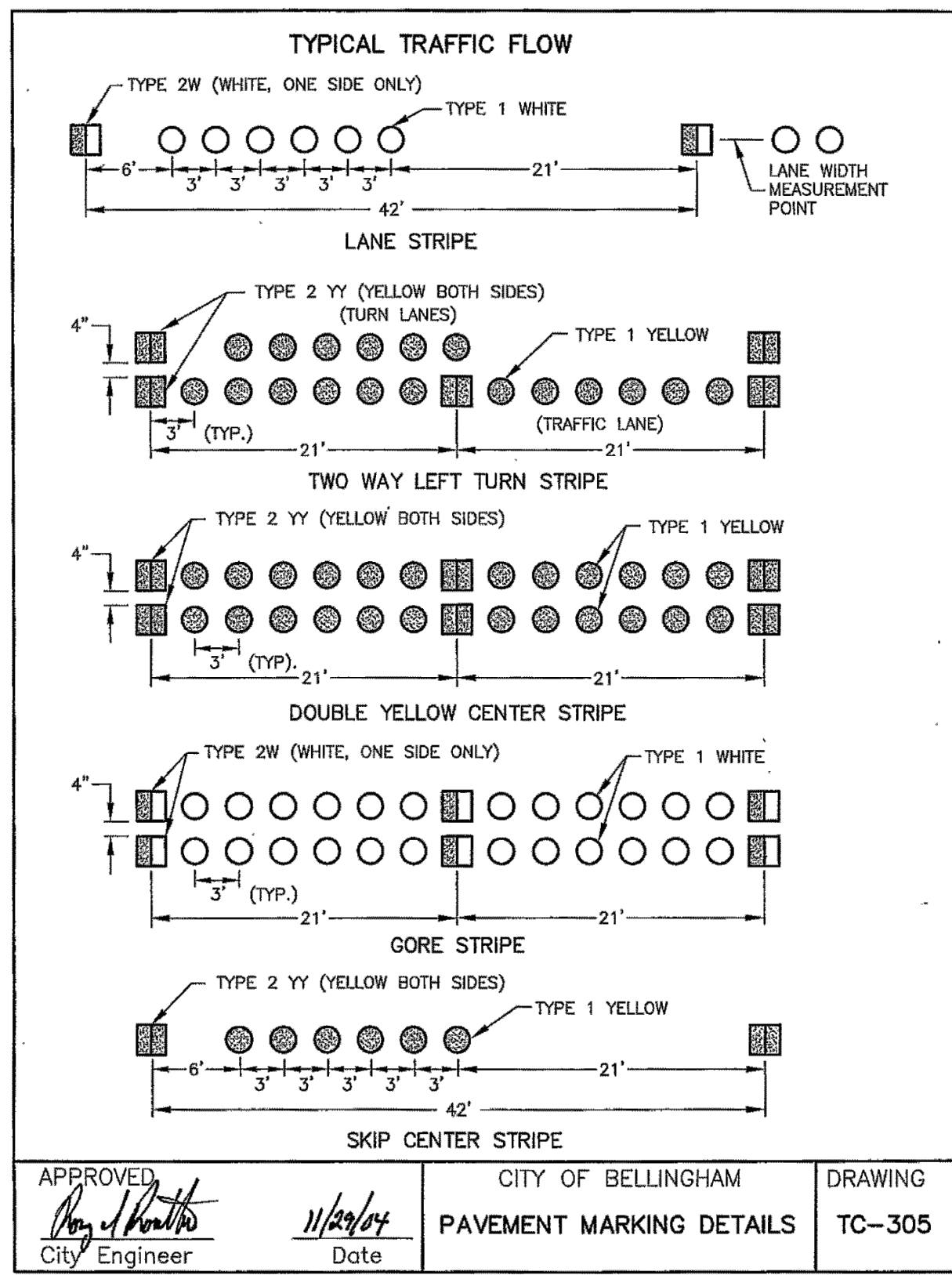
SCALE
Horiz. AS NOTED
Vert. AS NOTED

DATUM
NAD 83/98
NAVD 88

Job. No. ES566
Date 8/9/2024
Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
CHANNELIZATION DETAILS

SHEET
40 OF
51



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 WHAT TRANSPORTATION CAN BE.

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PROJECT ENGINEER KBC
 DESIGNED/DRAWN JK/IN/TK
 INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
 CITY ENGINEER M.L.W.
 ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

SCALE
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12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
CHANNELIZATION DETAILS

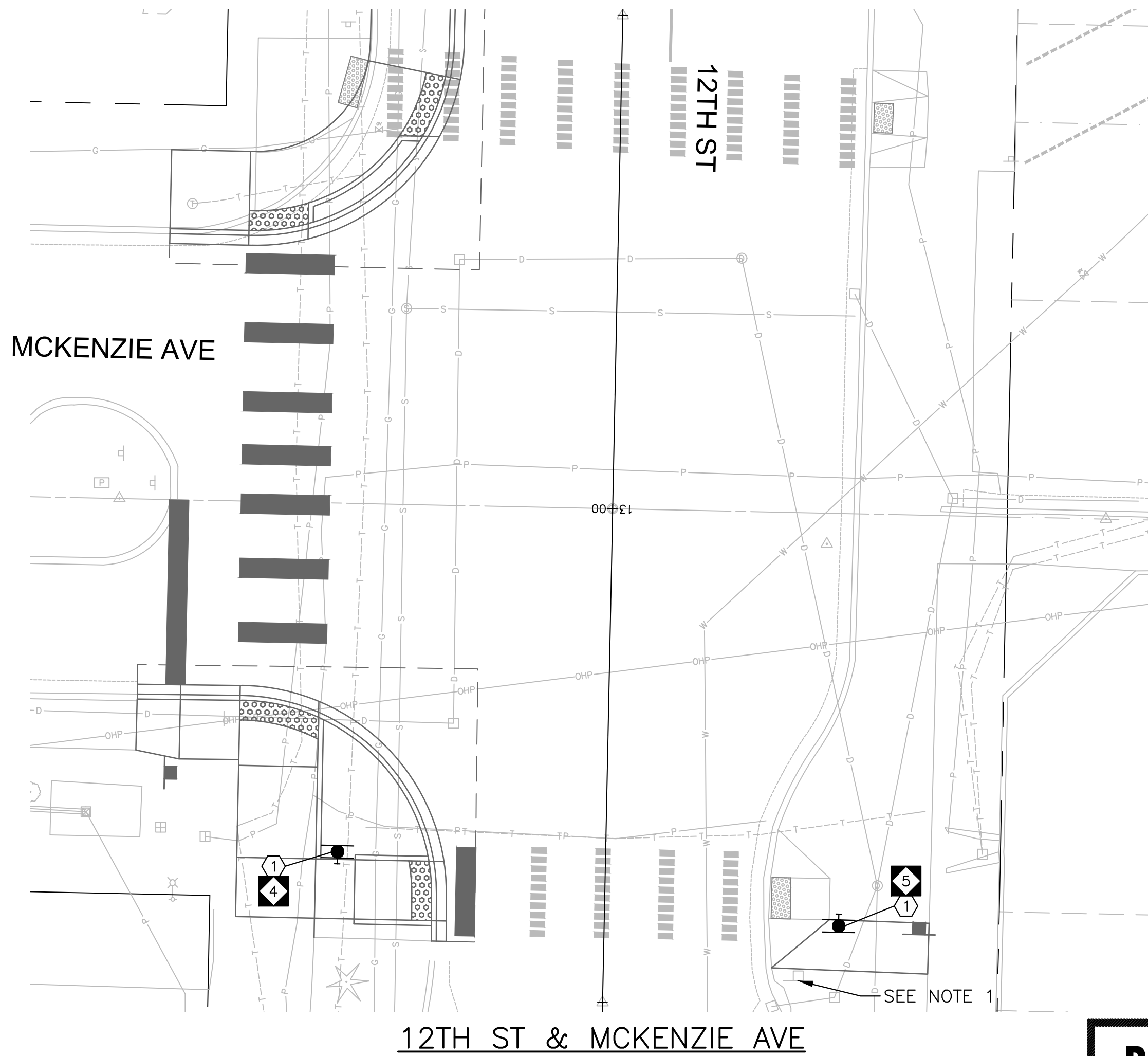
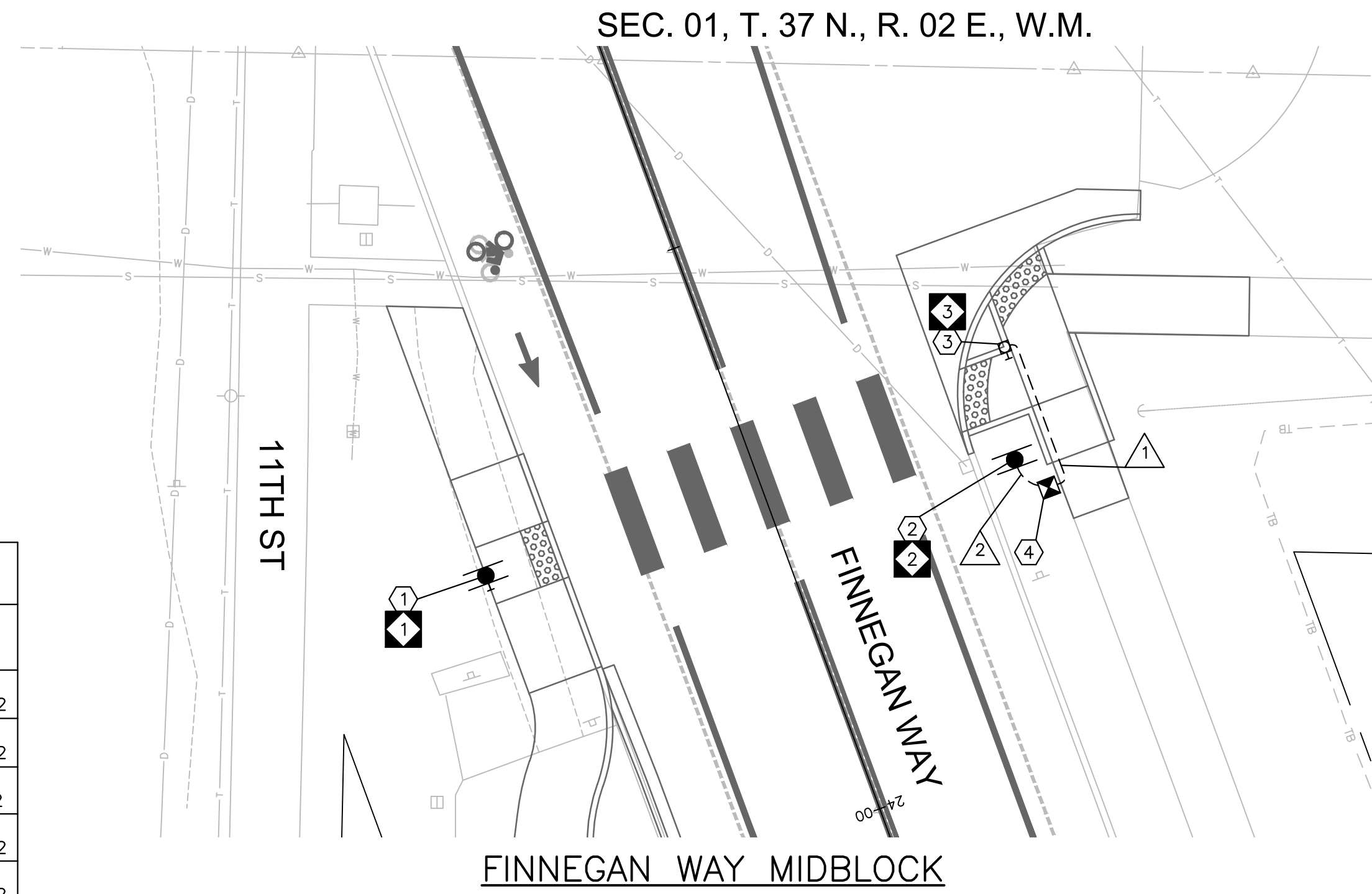
SHEET
 41 OF
 51

LEGEND

	RIGHT-OF-WAY
	CONDUIT
	CONSTRUCTION NOTE
	POLE NOTE
	WIRE NOTE
	DOUBLE SIDED RRFB POLE
	PEDESTRIAN PUSHBUTTON POST
	PEDESTRIAN PUSHBUTTON
	TYPE 1 JUNCTION BOX
	EXISTING SIGN

POLE SCHEDULE						
POLE NO.	CENTERLINE STATIONING	STATION	POLE OFFSET (FT)	LT.	RT.	COMMENT
1	FINNEGAN WAY	24+29.72	24.25	X		TYPICAL RRFB INSTALLATION WITH PUSHBUTTON PER DETAIL ON SHEET ELO2
2	FINNEGAN WAY	24+23.53	20.71		X	TYPICAL RRFB INSTALLATION WITHOUT PUSHBUTTON PER DETAIL ON SHEET ELO2
3	FINNEGAN WAY	24+32.67	23.17		X	PEDESTRIAN PUSHBUTTON POST AND FOUNDATION PER DETAIL ON SHEET ELO2
4	12TH ST	12+64.71	27.17	X		TYPICAL RRFB INSTALLATION WITH PUSHBUTTON PER DETAIL ON SHEET ELO2
5	12TH ST	12+58.23	23.76		X	TYPICAL RRFB INSTALLATION WITH PUSHBUTTON PER DETAIL ON SHEET ELO2

WIRING SCHEDULE					
# NO.	RACEWAY CONDUIT SIZE	PPB 2C(SH)	GROUND #8	CONDUIT FILL	COMMENTS
1	1" SCH40	1	1	18.28%	PPB POWER
2	2" SCH40	1	1	4.62%	PPB POWER

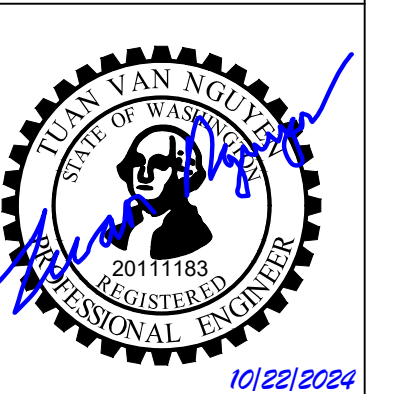


NOTE:

- SEE DEMOLITION PLAN FOR EXISTING SIGN REMOVAL DETAILS.
- RECTANGULAR RAPID FLASHING BEACON (RRFB) GENERAL NOTES:**
 - ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF BELLINGHAM STANDARD PLANS AND SPECIFICATIONS, THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD PLANS AND SPECIFICATIONS, AND THE CONTRACT, UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL FIELD VERIFY AND STAKE FINAL LOCATIONS OF ALL PROPOSED RRFB SIGNS AND FOUNDATIONS WITH THE ENGINEER PRIOR TO INSTALLATION. ALL PROPOSED SIGNS AND FOUNDATIONS SHALL BE LOCATED WITHIN RIGHT-OF-WAY AND PANELS SHALL NOT OVERHANG OUTSIDE OF RIGHT-OF-WAY. SIGN PANELS THAT OVERHANG SIDEWALKS/PATHWAYS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 7 FT FROM THE BOTTOM OF THE LOWEST PANEL TO THE ADJACENT SIDEWALK/PATHWAY SURFACE.
 - SIGN CODES REFER TO THE MUTCD.
 - ROADSIDE W16-7P SIGN SHALL HAVE ARROW POINT DOWNWARD TOWARDS THE DIRECTION OF THE CROSSWALK EITHER TO RIGHT (W16-7PR) OR TO THE LEFT (W16-7PL).
 - SEE CHANNELIZATION, SIGNING, PAVING, AND CURB RAMP PLANS FOR FURTHER DETAILS.
 - THE LOCATION OF EXISTING FEATURES AND UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING ELECTRICAL WORK. NOT ALL EXISTING FEATURES AND UTILITIES MAY BE SHOWN.
 - ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT UTILITY AGENCIES 48 HOURS PRIOR TO COMMENCING WORK AND SHALL COORDINATE WITH ALL AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY AGENCY IMMEDIATELY UPON DAMAGE AND SHALL BE RESPONSIBLE FOR REPLACING DAMAGED EQUIPMENT TO THE SATISFACTION OF THE AFFECTED UTILITY AGENCY.
 - POLE FOUNDATION LOCATIONS SHALL BE STAKED IN THE FIELD, POTHOLED TO VERIFY NO POTENTIAL UTILITY CONFLICTS EXIST, AND APPROVED BY THE ENGINEER PRIOR TO EXCAVATION.
 - THE CONTRACTOR SHALL CHECK FOR MINIMUM OVERHEAD CLEARANCE BETWEEN ANY OVERHEAD POWER AND COMMUNICATION LINES PRIOR TO PLACING FOUNDATIONS.
 - PEDESTRIAN PUSHBUTTON SHALL BE LOCATED WITHIN A 9-INCH MAXIMUM REACH FROM A CLEAR SPACE PER ADA ACCESSIBILITY GUIDELINES AND WSDOT DESIGN MANUAL.
 - THE CONTRACTOR SHALL EXERCISE CAUTION DURING CONSTRUCTION DUE TO NATURAL GAS AND ELECTRICAL FACILITIES. SEE SHEETS DEMOLITION AND PAVING PLANS FOR EXISTING UTILITIES INFORMATION.
 - SEE SHEET ELO2 FOR RECTANGULAR RAPID FLASHING BEACON (RRFB) AND PEDESTRIAN PUSHBUTTON (PPB) DETAILS.
 - PROPOSED AND MODIFIED JUNCTION BOXES SHALL BE BONDED AND GROUNDED PER NEC REQUIREMENTS.
 - ALL LIDS AND FRAMES FOR JUNCTION BOXES WITHIN SIDEWALK SECTIONS SHALL HAVE SLIP-RESISTANT LIDS.
 - THE LOCATIONS OF PROPOSED CONDUITS AND JUNCTION BOXES SHOWN IN THESE PLANS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY FINAL LOCATIONS WITH THE ENGINEERING PRIOR TO INSTALLATION.

CONSTRUCTION NOTES:

- CONSTRUCT FOUNDATION AND INSTALL DOUBLE SIDED RECTANGULAR RAPID FLASHING BEACON (RRFB) POLE, PUSHBUTTON, AND SIGN(S). INSTALL NEW PEDESTRIAN PUSHBUTTON AND SIGNS ON POLE ORIENTED PARALLEL TO CROSSWALK.
- CONSTRUCT FOUNDATION AND INSTALL DOUBLE SIDED RECTANGULAR RAPID FLASHING BEACON (RRFB) POLE AND SIGN(S). INSTALL NEW SIGNS ON POLE ORIENTED PARALLEL TO CROSSWALK.
- CONSTRUCT CURB BASE TYPE FOUNDATION AND INSTALL PEDESTRIAN PUSHBUTTON (PPB) POST WITH FIXED BASE. INSTALL ONE PEDESTRIAN PUSHBUTTON ON POST ORIENTED PARALLEL TO CROSSWALK.
- INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.



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PROJECT ENGINEER KBC
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INSPECTOR _____

DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

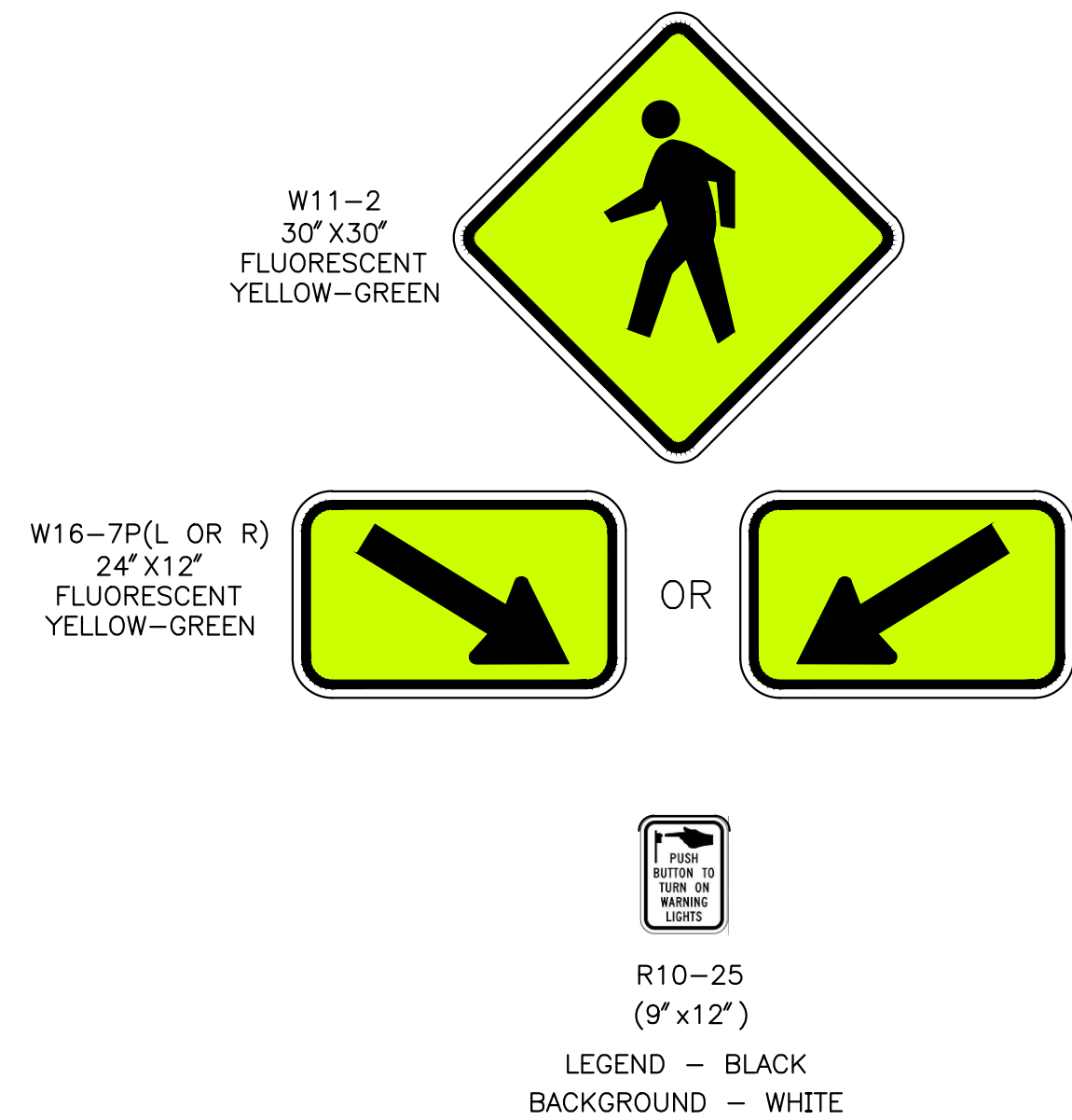
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NAVD 88

Job. No. ES566
Date 8/9/2024
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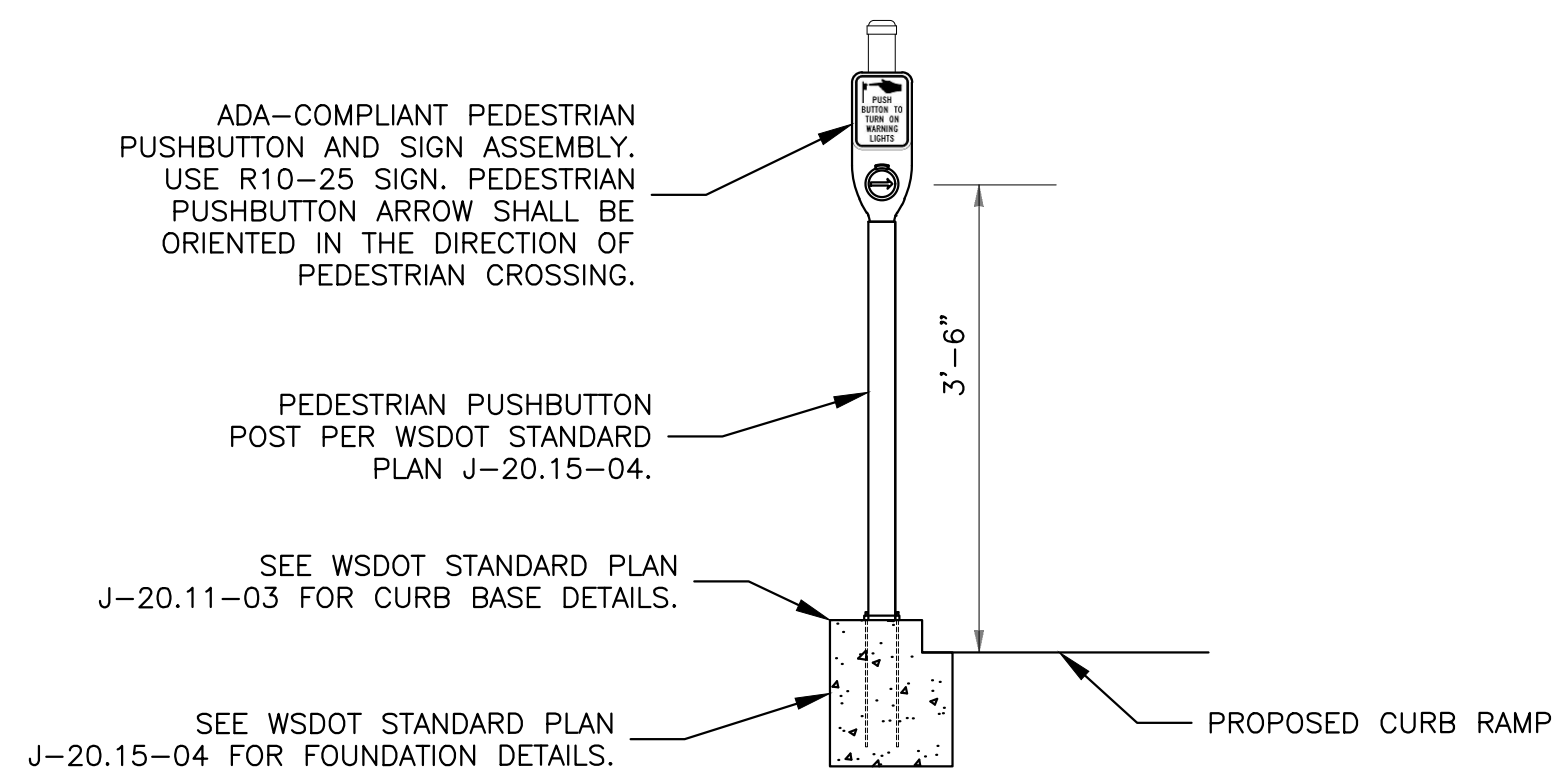
12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
RECTANGULAR RAPID FLASHING BEACON (RRFB) PLAN

SHEET
42 OF
51

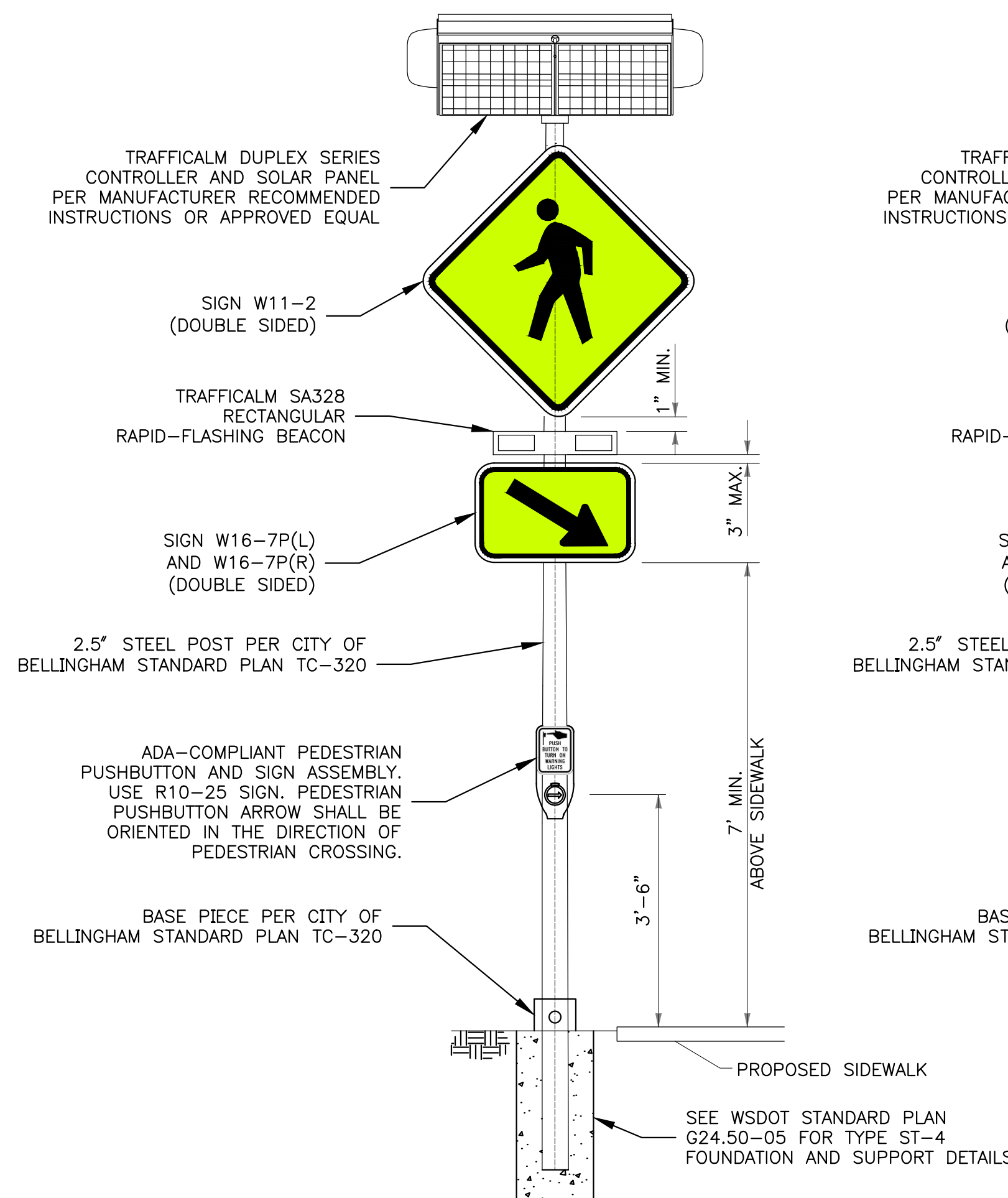


SIGN DETAIL NOTES:

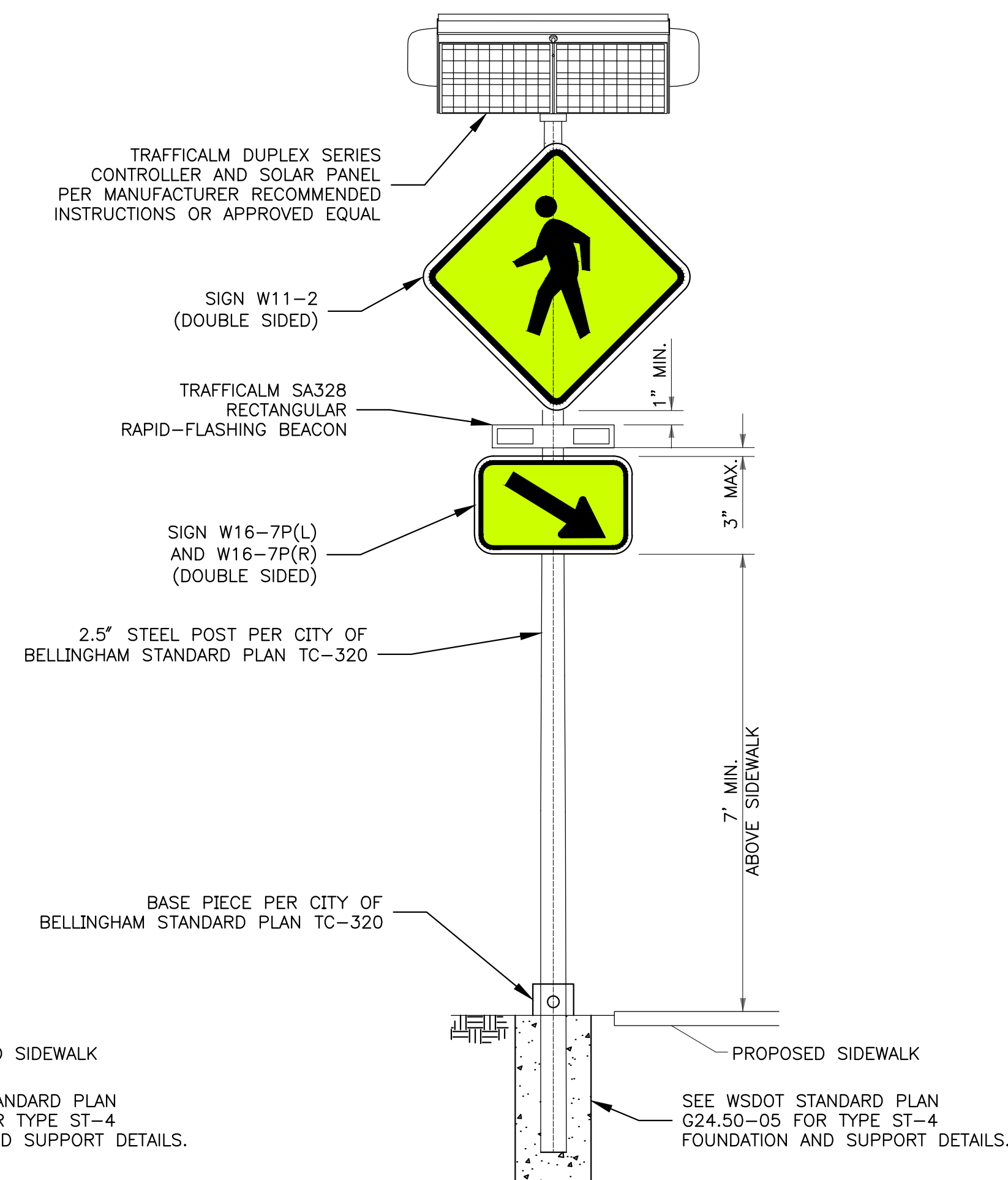
1. RRFB SIGNS, AS SHOWN ON THIS DETAIL AND THE PLANS, SHALL BE PROVIDED BY THE CONTRACTOR.
2. ALL OTHER GROUND-MOUNTED SMALL SIGNS SHALL BE PROVIDED BY THE CITY OF BELLINGHAM.
3. ORIENT SOLAR PANEL PER MANUFACTURER'S RECOMMENDATION.



PEDESTRIAN PUSHBUTTON (PPB) POST AND FOUNDATION DETAIL
N.T.S.



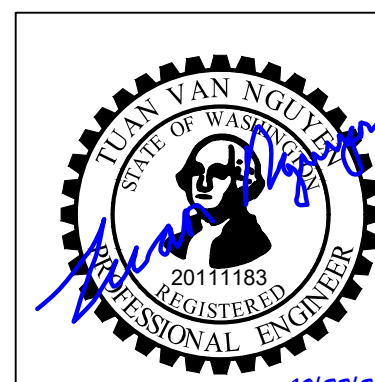
TYPICAL INSTALLATION WITH PUSHBUTTON (POLE 1, POLE 4, AND POLE 5)



TYPICAL INSTALLATION WITHOUT PUSHBUTTON (POLE 2)

RECTANGULAR RAPID FLASHING BEACON (RRFB) AND SIGN DETAIL

N.T.S.



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CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

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DATUM
NAD 83/98
NAVD 88

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Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
RECTANGULAR RAPID FLASHING BEACON (RRFB) PLAN - DETAILS

SHEET
43 OF
51

TRAFFIC SIGNAL GENERAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF BELLINGHAM STANDARD PLANS AND SPECIFICATIONS, THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD PLANS AND SPECIFICATIONS, AND THE CONTRACT, UNLESS OTHERWISE NOTED.
- A COPY OF THE APPROVED PLANS SHALL BE ON SITE DURING CONSTRUCTION.
- ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- THE LOCATION OF EXISTING FEATURES AND UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING TRAFFIC SIGNAL WORK. NOT ALL EXISTING FEATURES AND UTILITIES MAY BE SHOWN.
- ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT UTILITY AGENCIES 48 HOURS PRIOR TO COMMENCING WORK AND SHALL COORDINATE WITH ALL AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY AGENCY IMMEDIATELY UPON DAMAGE AND SHALL BE RESPONSIBLE FOR REPLACING DAMAGED EQUIPMENT TO THE SATISFACTION OF THE AFFECTED UTILITY AGENCY.
- THE LOCATIONS OF PROPOSED CONDUITS AND JUNCTION BOXES SHOWN IN THESE PLANS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY FINAL LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.
- POLE FOUNDATION LOCATIONS SHALL BE STAKED IN THE FIELD, POTHOLED TO VERIFY NO POTENTIAL UTILITY CONFLICTS EXIST, AND APPROVED BY THE ENGINEER PRIOR TO EXCAVATION.
- PEDESTRIAN PUSHBUTTON (PPB) POSTS WITH BREAKAWAY BASES AND FOUNDATIONS SHALL BE INSTALLED PER WSDOT STANDARD PLAN J-20.15-04.
- PEDESTRIAN SIGNAL (PS) POLES WITH BREAKAWAY COUPLINGS AND FOUNDATIONS SHALL BE INSTALLED PER WSDOT STANDARD PLANS J-20.16-02, J-20.20-02, AND J-21.10-05.
- TYPE 1 SIGNAL POLES WITH BREAKAWAY COUPLINGS AND FOUNDATIONS SHALL BE INSTALLED PER WSDOT STANDARD PLANS J-21.15-01, J-21.20-01, AND J-21.10-05.
- PEDESTRIAN PUSHBUTTONS SHALL BE APS (ACCESSIBLE PEDESTRIAN SIGNALS) STYLE PER WSDOT STANDARD PLAN J-20.26-01 AND SHALL INCLUDE PEDESTRIAN PUSHBUTTON INSTRUCTIONAL SIGN. THE CONTRACTOR SHALL CONFIRM THE ORIENTATION OF THE PEDESTRIAN PUSHBUTTONS WITH THE ENGINEER PRIOR TO ORDERING EQUIPMENT. THE FACE OF PEDESTRIAN PUSHBUTTONS SHALL BE INSTALLED PARALLEL WITH THE ASSOCIATED CROSSWALK, UNLESS OTHERWISE NOTED. PEDESTRIAN PUSHBUTTON SHALL HAVE SPEECH MESSAGES INDICATING THE ROADWAY CROSSING NAMES AS NOTED ON THE TABLE ON SHEET SG02. APS PEDESTRIAN PUSHBUTTONS SHALL BE LOCATED WITHIN A 9-INCH MAXIMUM REACH FROM A CLEAR SPACE, PER AMERICANS WITH DISABILITY ACT (ADA) GUIDELINES AND WSDOT DESIGN MANUAL. PEDESTRIAN PUSHBUTTONS SHALL BE ORIENTED PER WSDOT STANDARD PLAN J-20.05-00.
- PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE LED WITH Z-CRATE VISORS AND MOUNTED PER WSDOT STANDARD PLAN J-75.10-02.
- THE CONTRACTOR SHALL LABEL ALL CONDUCTORS FOR TRAFFIC SIGNAL AND LIGHTING SYSTEM WITHIN EACH JUNCTION BOX.
- PROPOSED AND MODIFIED JUNCTION BOXES SHALL BE BONDED AND GROUNDED PER NEC REQUIREMENTS.
- COORDINATE INSTALLATION OF THE THERMAL DETECTION SYSTEM WITH THE CITY OF BELLINGHAM AND/OR ENGINEER. THERMAL DETECTION CAMERA SHALL BE TELDYNE FLIR TRAFISENSE2 OR APPROVED EQUAL. THERMAL DETECTION CAMERA SHALL BE MOUNTED ON SIGNAL MAST ARM PER MANUFACTURER RECOMMENDED INSTRUCTIONS.
- ALL TRAFFIC SIGNAL AND PEDESTRIAN HEADS AND PUSHBUTTONS SHALL BE SECURELY COVERED WHEN NOT IN OPERATION.
- ALL NEW JUNCTION BOXES SHALL BE INSTALLED TO MATCH THE GRADE OF THE EXISTING/PROPOSED SIDEWALK OR LANDSCAPE AREA. THE CONTRACTOR SHALL AVOID PLACEMENT OF ANY CONDUITS, JUNCTION BOXES AND CABLE VAULTS IN LOCATIONS THAT WILL AFFECT EXISTING PEDESTRIAN CURB RAMPS.
- ALL LIDS AND FRAMES FOR JUNCTION BOXES WITHIN SIDEWALK SECTIONS SHALL HAVE SLIP-RESISTANT LIDS.
- NEW PEDESTRIAN SIGNAL HEADS INSTALLED ON TYPE PS SIGNAL POLE SHALL BE TYPE C OR TYPE D MOUNT PER WSDOT STANDARD PLAN J-75.10-02.
- ANY EXISTING UTILITIES THAT ARE IN SERVICE SHALL BE OPERATIONAL AT ALL TIMES.
- THE CONTRACTOR SHALL SUBMIT ALL MATERIAL CUT SHEETS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION.
- TYPE 1 AND 2 JUNCTION BOXES SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-40.10-04.
- TYPE 8 JUNCTION BOXES SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-40.30-04.
- MAST ARM MOUNTED TRAFFIC SIGNAL HEADS SHALL UTILIZE TYPE M MOUNTS IN ACCORDANCE WITH CITY OF BELLINGHAM STANDARD PLAN EL-420 UNLESS OTHERWISE NOTED. TOP OF POLE MOUNTED VEHICLE TRAFFIC SIGNAL HEAD SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-75.10-02. VEHICLE SIGNAL HEADS SHALL HAVE LOUVERED BACKPLATES WITH 2" YELLOW RETROREFLECTIVE BORDERS. VEHICLE SIGNAL HEADS SHALL HAVE 12" LENSES WITH TUNNEL VISORS.
- THE CONTRACTOR SHALL CHECK FOR MINIMUM OVERHEAD CLEARANCE OF 16FT - 6IN FOR ALL SIGNAL HEADS ABOVE EXISTING/PROPOSED FINISH GRADE PRIOR TO INSTALLING SIGNAL HEADS.
- SEE SHEET NT01 FOR ADDITIONAL GENERAL AND SURVEY NOTES.
- PLEASE NOTE THAT NEW TRAFFIC SIGNAL POLES CAN TAKE GREATER THAN SIX (6) MONTHS OF LEAD TIMES TO PROCURE, FABRICATE, AND DELIVER. PLEASE ORDER THE POLES AT THE EARLIEST POSSIBLE DATE AND SUBMIT SHOP DRAWINGS TO THE CITY OF BELLINGHAM AND SIGNAL DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING ORDER TO THE MANUFACTURER.
- SIGNS ON SIGNALS AND LIGHT STANDARDS SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN G-30.10-04.
- THE CONTRACTOR SHALL EXERCISE CAUTION DURING CONSTRUCTION AS NATURAL GAS AND ELECTRICAL FACILITIES EXIST WITHIN THE PROJECT LIMITS.

- INSPECTION AND ACCEPTANCE OF ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE DONE BY REPRESENTATIVES OF THE CITY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND SCHEDULE APPROPRIATE INSPECTIONS ALLOWING FOR PROPER ADVANCE NOTICE. THE INSPECTOR MAY REQUIRE REMOVAL AND RECONSTRUCTION OF ANY ITEMS PLACED IN THE RIGHT-OF-WAY THAT DO NOT MEET CITY STANDARDS OR THAT WERE CONSTRUCTED WITHOUT APPROPRIATE INSPECTIONS.
- ARTERIAL SIGNAL AND LUMINAIRE POLES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BELLINGHAM STANDARD PLAN EL-404.
- RECESSED TERMINAL COMPARTMENT AND TERMINAL BLOCK SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BELLINGHAM STANDARD PLANS EL-424 AND EL-428.
- TYPE II AND TYPE III TRAFFIC SIGNAL STANDARD FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-26.10-03 AND J-26.15-01. POLE IDENTIFICATION TAGS SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-20.01-01.
- LUMINAIRE POLE FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BELLINGHAM STANDARD PLAN EL-432.
- TYPE "P" SIGNAL CABINET BASE, FOUNDATION, AND PAD SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BELLINGHAM STANDARD PLAN EL-436.
- 20 CONDUCTOR (20C) SIGNAL CABLE SHALL BE IN ACCORDANCE WITH THE CITY OF BELLINGHAM STANDARD PLAN EL-448.
- PULL BOXES SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-90.10-03.
- CABLE VAULTS SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD PLAN J-90.20-03.
- STREET LIGHT SYSTEM FUSING SHALL BE IN ACCORDANCE WITH THE CITY OF BELLINGHAM STANDARD PLAN EL-400.
- EXISTING CONDUCTORS LISTED IN THE WIRING SCHEDULE ARE FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM CONDUIT CONTENTS IN THE FIELD.
- DIMENSIONS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

TRAFFIC SIGNAL LEGEND

DESCRIPTION

- RIGHT-OF-WAY
- CONDUIT
- CONSTRUCTION NOTE
- SIGNAL POLE CONSTRUCTION NOTE
- WIRE NOTE
- SIGN NOTE
- LUMINAIRE POLE NUMBER
- TYPE II/III SIGNAL POLE AND MAST ARM
- TYPE I SIGNAL POLE
- PEDESTRIAN SIGNAL STANDARD (PS)
- ACCESSIBLE PEDESTRIAN PUSHBUTTON POST (PPB)
- ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSHBUTTON ASSEMBLY
- PEDESTRIAN SIGNAL HEAD
- TYPE 1 JUNCTION BOX
- TYPE 2 JUNCTION BOX
- TYPE 8 JUNCTION BOX
- CABLE VAULT
- PULL BOX
- LUMINAIRE
- STREET LIGHT LUMINAIRE AND POLE
- DECORATIVE PENDANT STREET LIGHT AND POLE
- VEHICLE SIGNAL HEAD
- EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR
- MAST ARM MOUNTED SIGN
- MAST ARM MOUNTED STREET NAME SIGN
- TENON (FOR FUTURE USE)
- THERMAL DETECTION CAMERA
- THERMAL DETECTION ZONE
- ELECTRICAL SERVICE CABINET
- TRAFFIC SIGNAL CONTROLLER CABINET, FOUNDATION, AND PAD

EXISTING

PROPOSED

SIGN LEGEND

D3-2
W/G
8" SERIES D
30" X 96"

①



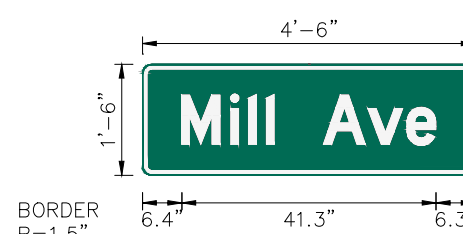
D3-2
W/G
8" SERIES D
30" X 96"

②



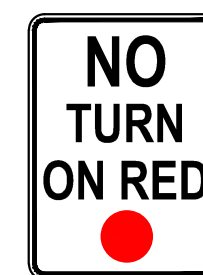
D3-2
W/G
8" SERIES D
18" X 54"

③



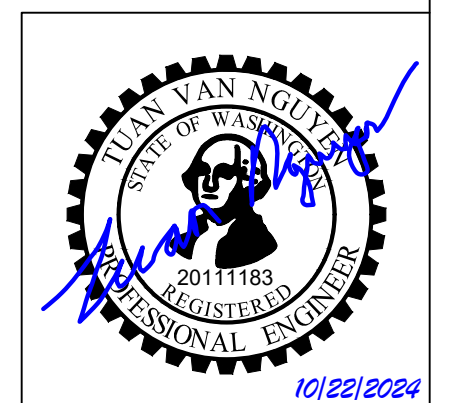
R10-11
B/W/R
24" X 30"

④A ④B



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SG01

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1			
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DIRECTOR PUBLIC WORKS M.A.O.
CITY ENGINEER M.L.W.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
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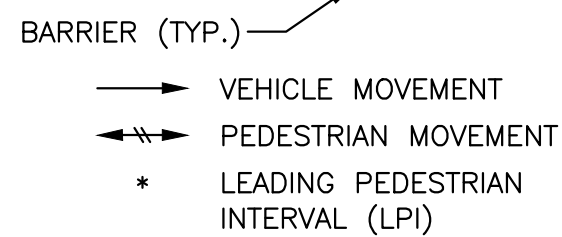
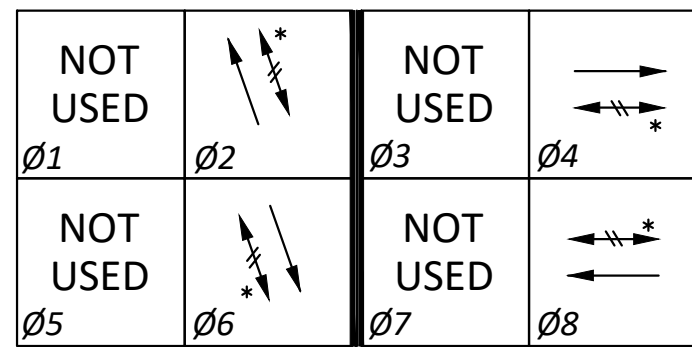
12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
TRAFFIC SIGNAL - GENERAL NOTES AND LEGEND

SHEET
44 OF
51

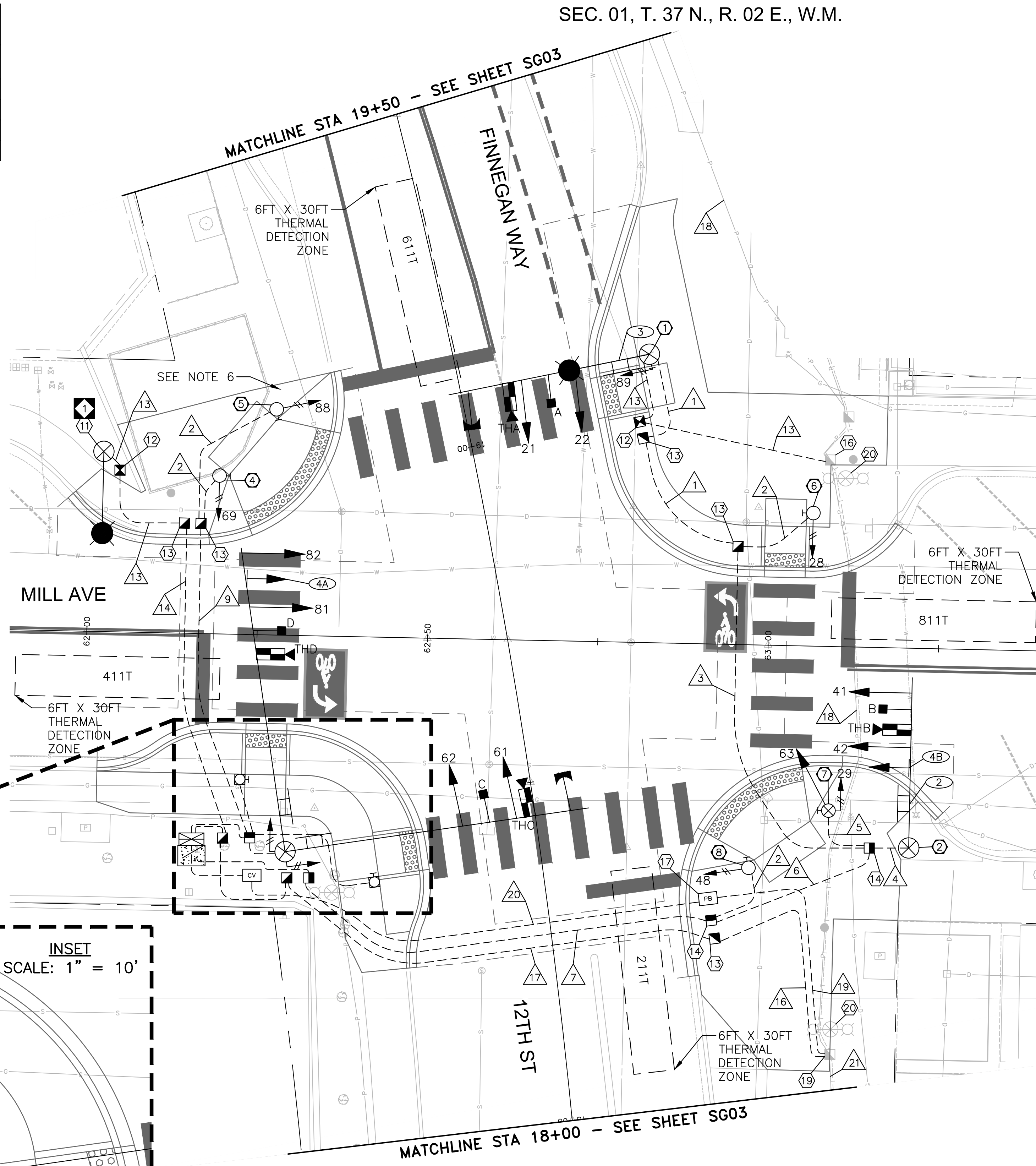
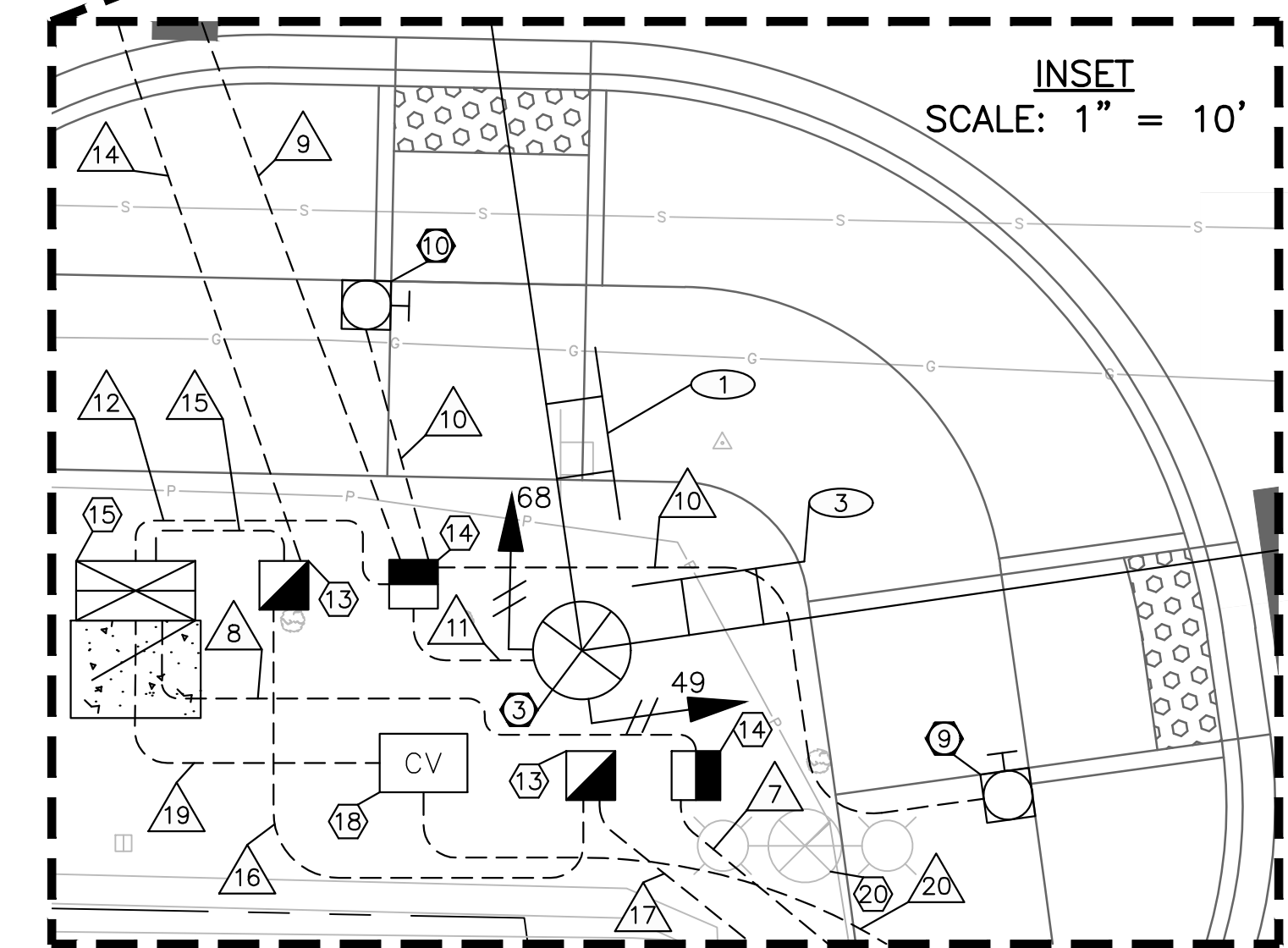
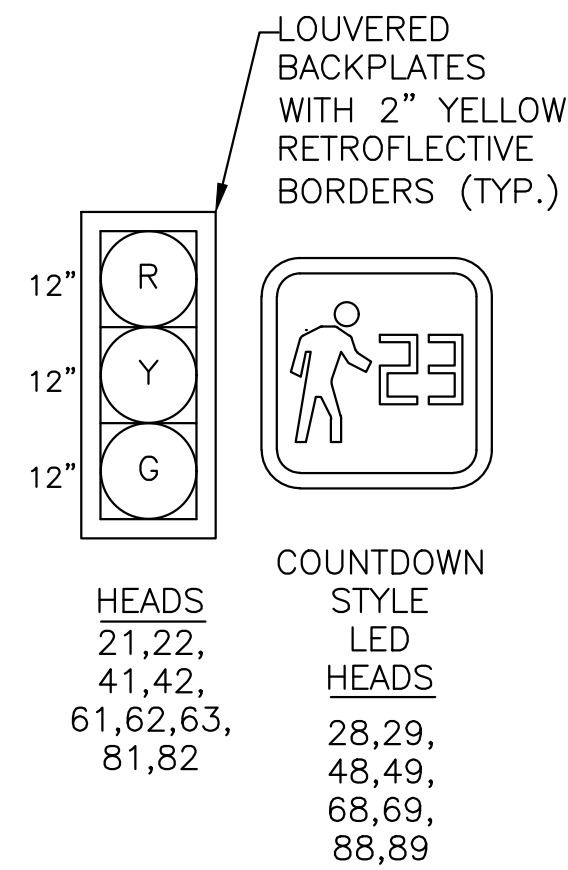
APS SPEECH MESSAGES			
STREET (A)	STREET (B)	ARROW DIRECTION	QUANTITY
TWELFTH	MILL	L	2
TWELFTH	MILL	R	2
MILL	TWELFTH	L	2
MILL	TWELFTH	R	2

SPEECH MESSAGES SHALL BE PROVIDED IN THE FOLLOWING FORMAT:
 "WAIT."
 "WAIT TO CROSS (A) AT (B)."
 "WALK SIGN IS ON TO CROSS (A)."

PROPOSED SIGNAL PHASE DIAGRAM



SIGNAL HEAD ASSIGNMENTS

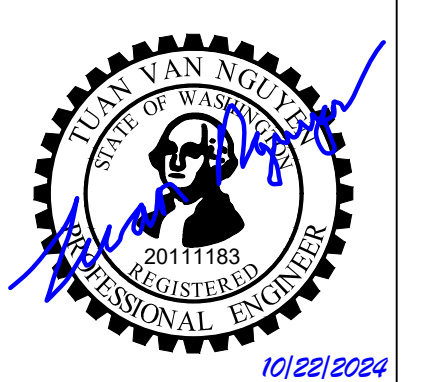


NOTES:

- SEE SHEET SG01 FOR TRAFFIC SIGNAL GENERAL NOTES, SIGN LEGEND, AND LEGEND.
- SEE SHEET SG03 FOR STREET LIGHT ONE-LINE DIAGRAM.
- SEE SHEET SG04 FOR WIRING SCHEDULE, PRE-EMPTION SCHEDULE, LUMINAIRE POLE SCHEDULE, AND EXISTING SERVICE CABINET BREAKER SCHEDULE.
- SEE SHEET SG05 FOR TRAFFIC SIGNAL WIRING TERMINATIONS.
- SEE SHEET SG06 FOR TRAFFIC SIGNAL POLE CHART.
- SEE DEMOLITION PLAN FOR EXISTING PATIO REMOVAL DETAILS. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 4FT WALKAROUND DISTANCE AT BASE OF SIGNAL POLE AND PROPOSED PATIO.

CONSTRUCTION NOTES:

- CONSTRUCT SIGNAL STANDARD FOUNDATION AND INSTALL TYPE III SIGNAL POLE WITH 30FT MAST ARM AND RECESSED TERMINAL COMPARTMENT. INSTALL TWO VEHICLE SIGNAL HEADS, ONE TENON FOR FUTURE VEHICLE SIGNAL HEAD, ONE EVP DETECTOR, ONE THERMAL DETECTION CAMERA, AND ONE STREET NAME SIGN ON MAST ARM. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE AND ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD (TYPE E MOUNT) ON POLE. TOP OF FOUNDATION SHALL BE FLUSH WITH ADJACENT FINISHED SIDEWALK OR CURB. INSTALL ONE 95W CREE XSPMD LED LUMINAIRE FIXTURE (XSPMD-D-HT-2ME-12L-40K7-UL-SV-N-Q4) AT 30FT MOUNTING HEIGHT WITH 12FT LUMINAIRE ARM.
- CONSTRUCT SIGNAL STANDARD FOUNDATION AND INSTALL TYPE II SIGNAL POLE WITH 25FT MAST ARM AND RECESSED TERMINAL COMPARTMENT. INSTALL TWO VEHICLE SIGNAL HEADS, ONE EVP DETECTOR, ONE THERMAL DETECTION CAMERA, ONE REGULATORY SIGN, AND ONE STREET NAME SIGN ON MAST ARM. TOP OF FOUNDATION SHALL BE FLUSH WITH ADJACENT FINISHED SIDEWALK OR CURB.
- CONSTRUCT SIGNAL STANDARD FOUNDATION AND INSTALL TYPE II DOUBLE MAST ARM SIGNAL POLE WITH ONE 45FT MAST ARM SERVING SOUTHBOUND DIRECTION (VEHICLE SIGNAL PHASE 6) AND ONE 45FT MAST ARM SERVING WESTBOUND DIRECTION (VEHICLE SIGNAL PHASE 8) AND RECESSED TERMINAL COMPARTMENT. INSTALL TWO VEHICLE SIGNAL HEADS, ONE TENON FOR FUTURE SIGNAL HEAD, ONE EVP DETECTOR, ONE THERMAL DETECTION CAMERA, AND ONE STREET NAME SIGN ON THE MAST ARM SERVING THE SOUTHBOUND DIRECTION (VEHICLE SIGNAL PHASE 6). INSTALL TWO VEHICLE SIGNAL HEADS, ONE EVP DETECTOR, ONE THERMAL DETECTION CAMERA, ONE REGULATORY SIGN, AND ONE STREET NAME SIGN ON THE MAST ARM SERVING THE WESTBOUND DIRECTION (VEHICLE SIGNAL PHASE 8). TOP OF FOUNDATION SHALL BE FLUSH WITH ADJACENT FINISHED SIDEWALK OR CURB.
- CONSTRUCT FOUNDATION AND INSTALL TYPE PS SIGNAL POLE WITH BREAKAWAY COUPLINGS. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE AND ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD (TYPE D MOUNT) ON POLE.
- CONSTRUCT FOUNDATION AND INSTALL TYPE PS SIGNAL POLE WITH BREAKAWAY COUPLINGS. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE AND ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD (TYPE D MOUNT) ON POLE.
- CONSTRUCT FOUNDATION AND INSTALL TYPE PS SIGNAL POLE WITH BREAKAWAY COUPLINGS. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE AND ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD (TYPE D MOUNT) ON POLE.
- CONSTRUCT FOUNDATION AND INSTALL TYPE I SIGNAL POLE WITH BREAKAWAY COUPLINGS. INSTALL ONE VEHICLE SIGNAL HEAD (TOP MOUNT), ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE, AND ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD (TYPE E MOUNT) ON POLE.
- CONSTRUCT FOUNDATION AND INSTALL TYPE PS SIGNAL POLE WITH BREAKAWAY COUPLINGS. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE AND ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD (TYPE D MOUNT) ON POLE.
- CONSTRUCT FOUNDATION AND INSTALL PEDESTRIAN PUSHBUTTON POST WITH BREAKAWAY BASE. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE.
- CONSTRUCT FOUNDATION AND INSTALL PEDESTRIAN PUSHBUTTON POST WITH BREAKAWAY BASE. INSTALL ONE APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH APS SPEECH MESSAGE.
- CONSTRUCT ARTERIAL LUMINAIRE POLE FOUNDATION AND INSTALL ARTERIAL LUMINAIRE POLE. INSTALL ONE 95W CREE XSPMD LED LUMINAIRE FIXTURE (XSPMD-D-HT-2ME-12L-40K7-UL-SV-N-Q4) AT 30FT MOUNTING ARM WITH 12FT LUMINAIRE ARM.
- INSTALL TYPE 1 JUNCTION BOX.
- INSTALL TYPE 2 JUNCTION BOX.
- INSTALL TYPE 8 JUNCTION BOX.
- CONSTRUCT TYPE "P" SIGNAL CABINET BASE AND CONCRETE PAD. INSTALL ONE FULLY LOADED TYPE "P" TRAFFIC SIGNAL CONTROLLER CABINET AND ALL APPURTENANCES ON SIGNAL CABINET BASE. COORDINATE WITH CITY OF BELLINGHAM TRAFFIC SIGNAL STAFF FOR INSTALLATION AND SIGNAL TURN-ON WITHIN NEW TRAFFIC SIGNAL CONTROLLER CABINET. INTERCONNECT TERMINATION WITHIN NEW TRAFFIC SIGNAL CONTROLLER CABINET WILL BE PERFORMED BY CITY OF BELLINGHAM TRAFFIC SIGNAL STAFF.
- MAINTAIN AND PROTECT EXISTING JUNCTION BOX. ADJUST LID AND FRAME TO FINAL GRADE. ROUTE NEW CONDUIT INTO EXISTING JUNCTION BOX.
- INSTALL PULL BOX.
- INSTALL CABLE VAULT.
- MAINTAIN AND PROTECT EXISTING JUNCTION BOX. ROUTE NEW CONDUIT(S) INTO EXISTING JUNCTION BOX.
- MAINTAIN AND PROTECT EXISTING DECORATIVE PENDANT STREET LIGHT.



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 ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
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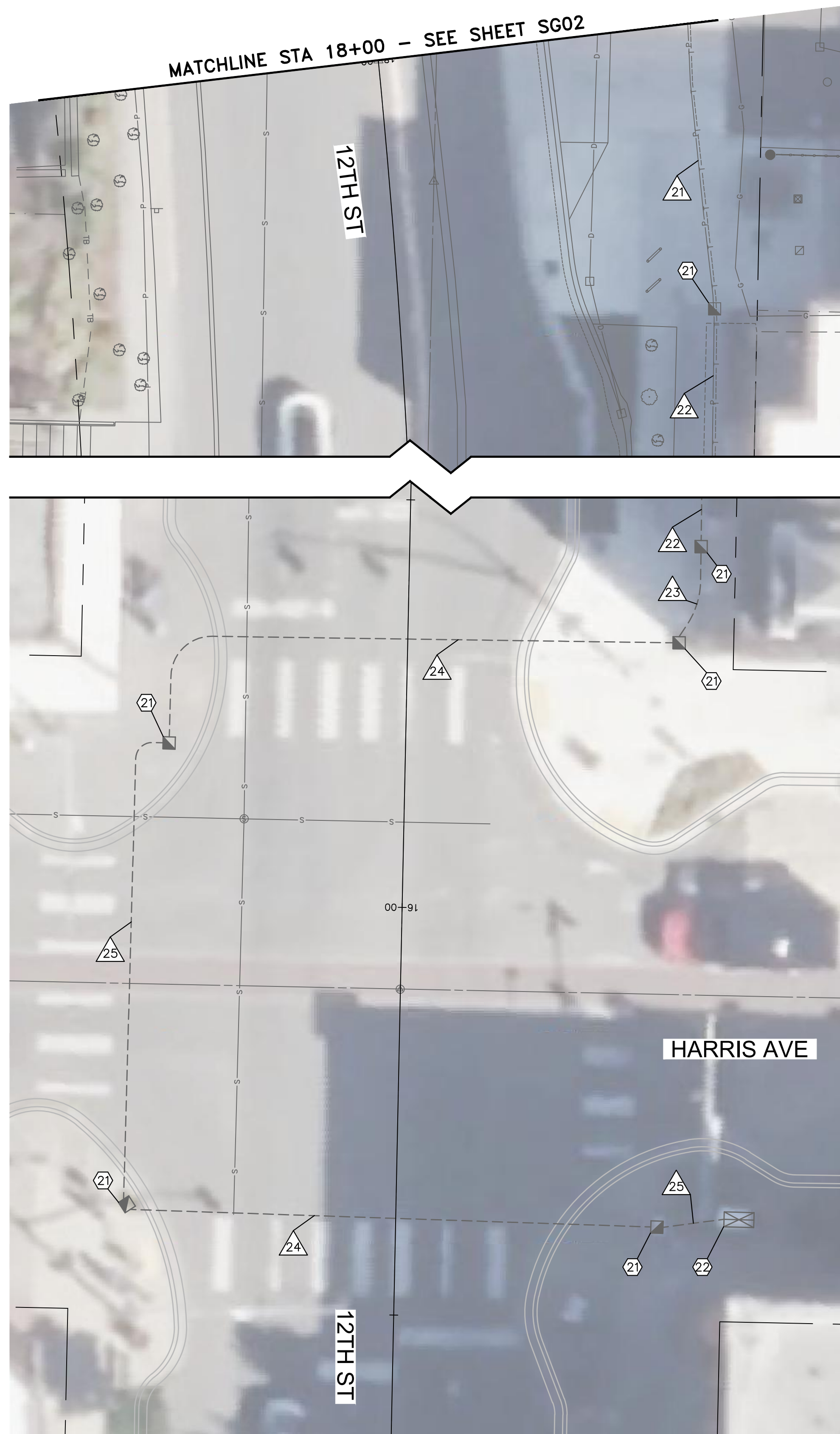
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 Field Bk. _____

12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
TRAFFIC SIGNAL PLAN

SHEET 45 OF 51



SEC. 01, T. 37 N., R. 02 E., W.M.



NOTES:

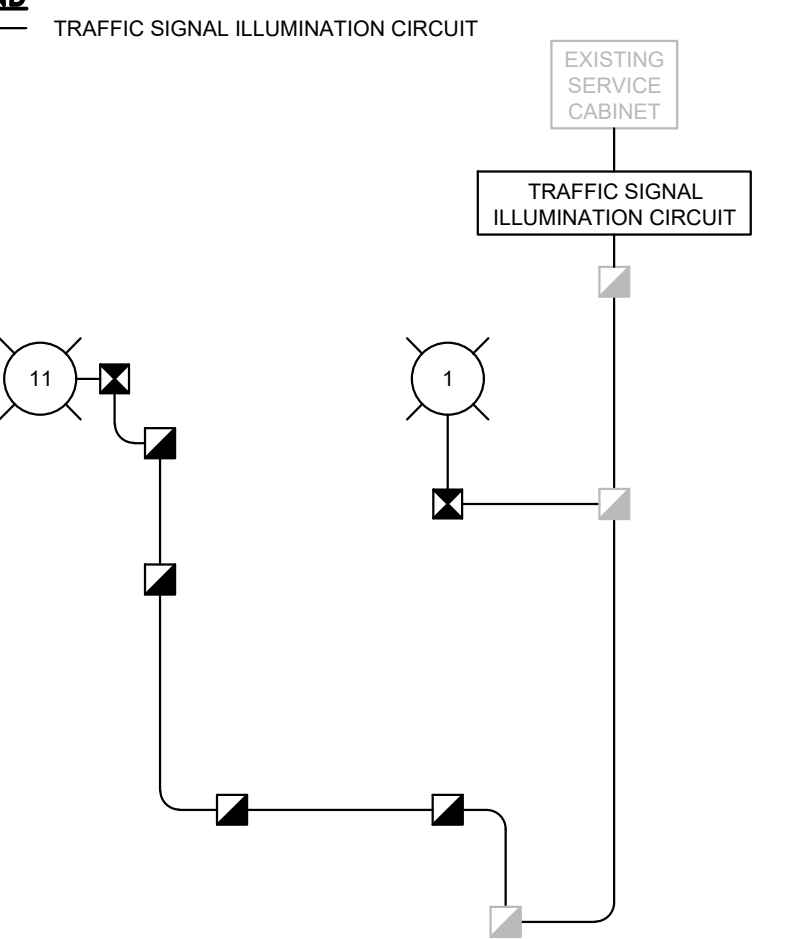
1. SEE SHEET SG01 FOR TRAFFIC SIGNAL GENERAL NOTES, SIGN LEGEND, AND LEGEND.
2. SEE SHEET SG05 FOR TRAFFIC SIGNAL WIRING TERMINATIONS.

CONSTRUCTION NOTES:

- 21 MAINTAIN AND PROTECT EXISTING JUNCTION BOX.
- 22 MAINTAIN AND PROTECT EXISTING TRAFFIC SIGNAL CONTROLLER CABINET. COORDINATE WITH CITY OF BELLINGHAM TRAFFIC SIGNAL STAFF FOR ACCESS. INTERCONNECT TERMINATION WITHIN EXISTING TRAFFIC SIGNAL CONTROLLER CABINET WILL BE PERFORMED BY CITY OF BELLINGHAM TRAFFIC SIGNAL STAFF.
- 23 MAINTAIN AND PROTECT EXISTING ELECTRICAL SERVICE CABINET. COORDINATE WITH CITY OF BELLINGHAM TRAFFIC SIGNAL STAFF FOR ACCESS.

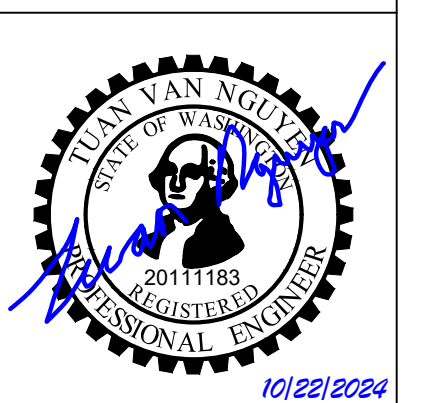
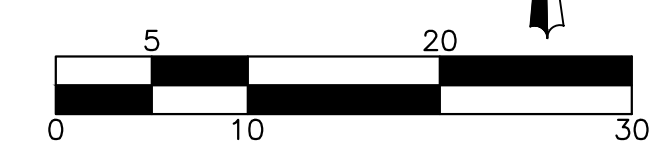
STREET LIGHT ONE-LINE DIAGRAM
NOT TO SCALE

LEGEND

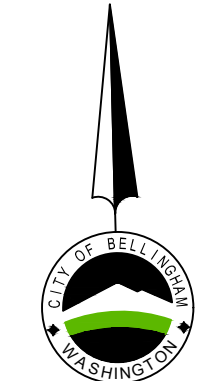


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ASSISTANT DIRECTOR M.A.O.

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12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
TRAFFIC SIGNAL PLAN

SHEET
46 OF
51

WIRING SCHEDULE													
NO.	RACEWAY CONDUIT SIZE*	PPB 2C(SH)	PED HEAD/PPB 4C	PED HEAD 5C	VEH HEAD 5C	VEH/PED HEAD 20C	EVP 3C(SH)	THERMAL DETECTION CAT5E	ILLUM #6	SIGNAL POWER #6	INTERCONNECT 12 SMFO	GROUND #8	CONDUIT FILL %
1	3" SCH40	1				1	1	1				1	10.24%
2	2" SCH40	1		1								1	8.87%
3	3" SCH80	2		1		1	1	1				1	15.12%
	3" SCH80	SPARE (EMPTY WITH PULL TAPE)											
4	3" SCH40					1	1	1				1	9.00%
5	2" SCH40	1		1	1							1	13.13%
6	4" SCH40	3		2	1	2	2	2				1	15.42%
7	4" SCH80	4		3	1	2	2	2				1	19.24%
	4" SCH80	SPARE (EMPTY WITH PULL TAPE)											
8	4" SCH40	4		3	1	2	2	2				1	17.25%
	3" SCH40	SPARE (EMPTY WITH PULL TAPE)											
9	3" SCH80	2		2								1	8.10%
	3" SCH80	SPARE (EMPTY WITH PULL TAPE)											
10	1" SCH40	1	1									1	25.49%
11	3" SCH40		2			2	2	2				1	18.80%
12	4" SCH80	4		2		2	2	2				1	16.75%
	3" SCH80	SPARE (EMPTY WITH PULL TAPE)											
13	2" SCH40								2			1	6.81%
14	2" SCH80								2			1	7.79%
	2" SCH80	SPARE (EMPTY WITH PULL TAPE)											
15	2" SCH40									2		1	6.81%
16	2" SCH40								2	2		1	11.73%
17	2" SCH80								2	2		1	13.43%
	2" SCH80	SPARE (EMPTY WITH PULL TAPE)											
18	EX 2"								2, 2(EX)	2		1	19.07%
19	2" SCH40										1	1	5.90%
20	2" SCH80										1	1	6.75%
	2" SCH80	SPARE (EMPTY WITH PULL TAPE)											
21	EX 2"										1	1	6.75%
22	EX 2"								2(EX)		1, 1(EX)	1(EX)	16.98%
23	EX 2"										1, 1(EX)	1(EX)	11.34%
24	EX 4"										1, 1(EX)	1(EX)	2.90%
25	EX 3"										1, 1(EX)	1(EX)	5.06%

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 8) UNLESS OTHERWISE NOTED.
(EX) = EXISTING

EXISTING SERVICE CABINET BREAKER SCHEDULE AT 12TH ST					
SERVICE & CIRCUITS	VOLTAGE (VOLTS)	LOAD (WATTS)	MAIN BREAKER (AMPS)	BRANCH BREAKER (AMPS)	CONTACTOR (AMPS)
EXISTING SERVICE	120/240	3190*	100(EX)		
TRAFFIC SIGNAL ILLUMINATION	240	190		20	30
TRAFFIC SIGNAL	120	3000		50(EX)	
PHOTOELECTRIC CONTROL	120			15(EX)	

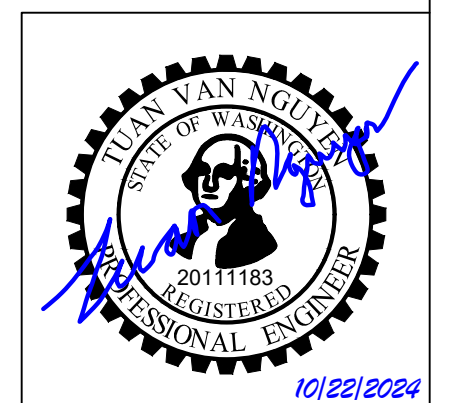
* NOT ALL EXISTING LOADS ARE SHOWN. TOTAL LOADS SHOWN WITHIN TABLE ARE FOR THE PROPOSED TRAFFIC SIGNAL AND STREET LIGHTS AS SHOWN WITHIN THIS PLAN.
(EX) = EXISTING

PRE-EMPTION SCHEDULE	
CHANNEL	SIGNAL PHASE(S)
A	2
B	4
C	6
D	8

LUMINAIRE POLE SCHEDULE									
LUMINAIRE POLE NO.	CENTERLINE STATIONING	STATION	OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	SVC/CKT NO.	COMMENT	
1	12TH ST	19+10.48	53.03FT LT	30FT	12FT	95W	TRAFFIC SIGNAL ILLUMINATION		

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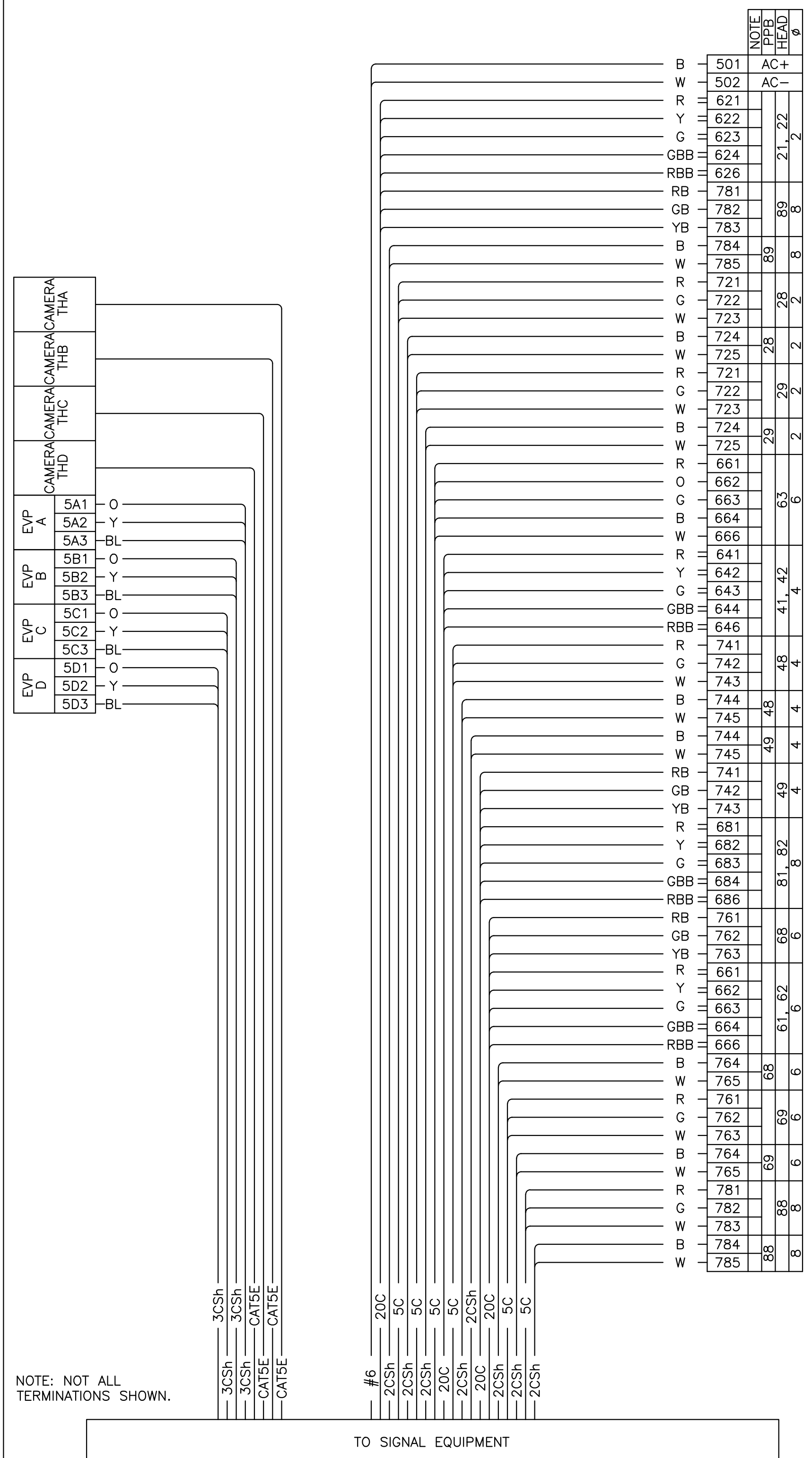


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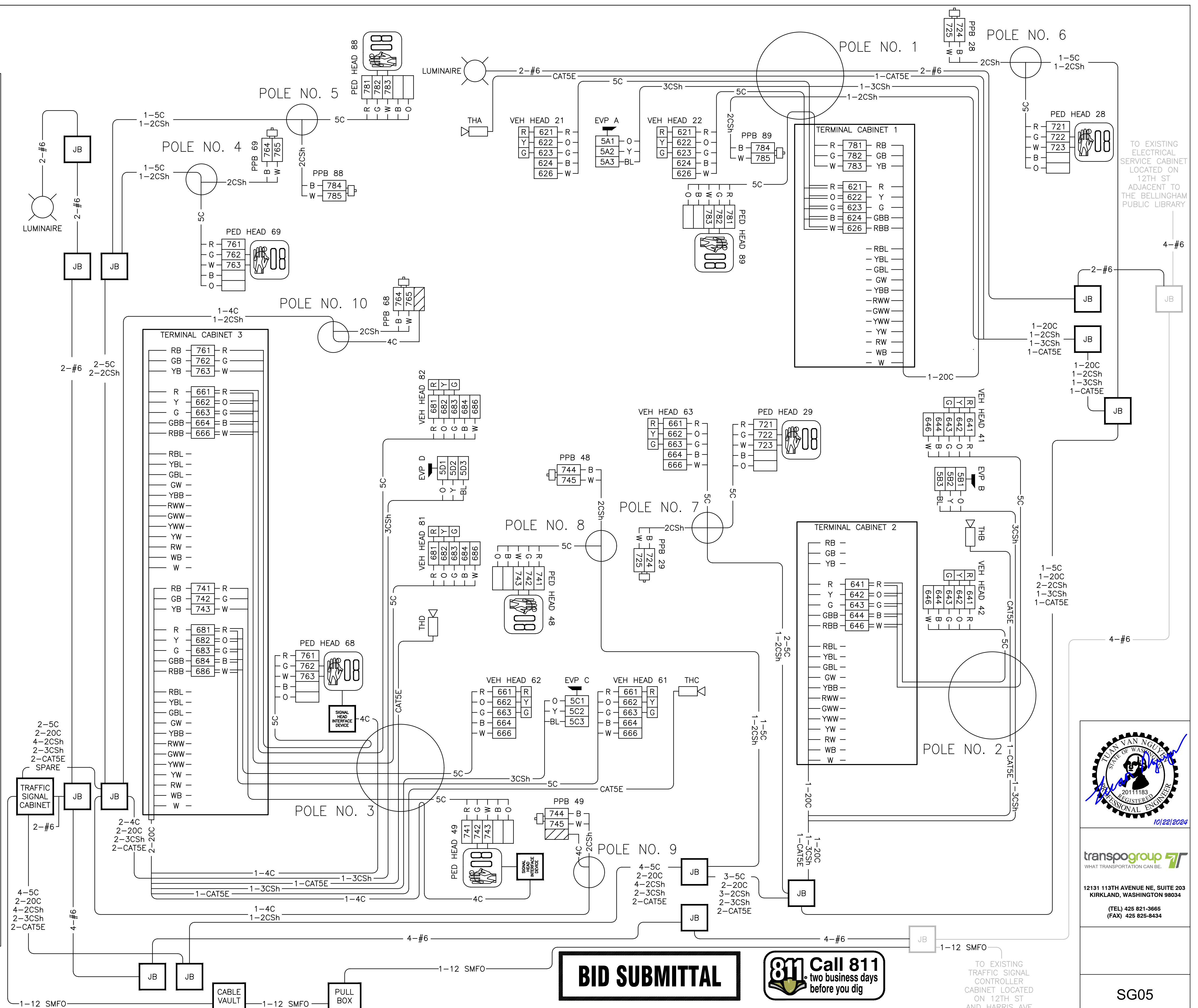
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SG04

TRAFFIC SIGNAL CONTROLLER CABINET TERMINATIONS



NOTE:
 1. ALL CONDUIT SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 8) UNLESS OTHERWISE NOTED.



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12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
TRAFFIC SIGNAL - WIRING TERMINATIONS

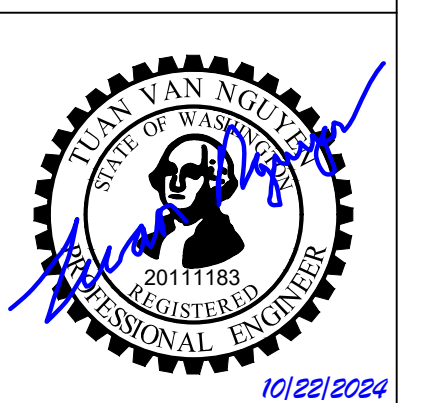
SHEET **48** OF **51**

CONTACT PERSON: KYLE CARLSON

PROJECT ENGINEER AT (360) 778-7946

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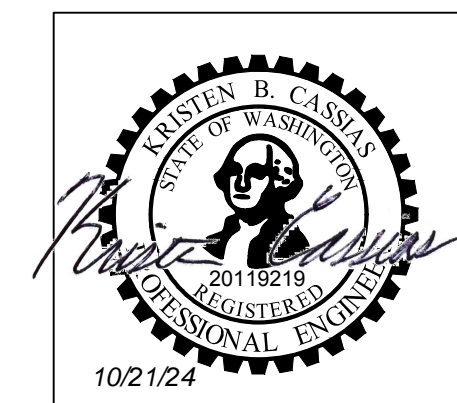
TRAFFIC CONTROL GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 6, WSDOT STANDARD SPECIFICATIONS, AND THE CONTRACT, UNLESS OTHERWISE NOTED. A COPY OF THESE DOCUMENTS SHALL BE ON SITE DURING CONSTRUCTION.
2. POSTED SPEEDS WITHIN THE PROJECT SITE ARE AS FOLLOWS:
 - 12TH ST = 25 MPH
 - FINNEGAN WAY = 25 MPH
 - MILL AVE = 25 MPH
 - MCKENZIE AVE = 25 MPH
3. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES, UNLESS OTHERWISE NOTED IN THESE PLANS OR APPROVED BY THE ENGINEER.
4. MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES. THE CONTRACTOR SHALL NOTIFY AND COORDINATE ANY DRIVEWAY CLOSURES WITH THE PROPERTY OWNER A MINIMUM OF 2 WORKING DAYS IN ADVANCE.
5. MAINTAIN ACCESS TO TRANSIT STOPS AT ALL TIMES. COORDINATE WITH WHATCOM TRANSIT (360-676-7433) A MINIMUM OF 10 CALENDAR DAYS IN ADVANCE OF IMPLEMENTING TEMPORARY TRAFFIC CONTROL THAT WOULD IMPACT A TRANSIT STOP. COORDINATE WITH WHATCOM TRANSIT REGARDING REQUIREMENTS FOR TEMPORARILY RELOCATING TRANSIT STOPS.
6. FLAGGING STATIONS SHALL BE ILLUMINATED DURING HOURS OF DARKNESS AS APPROVED BY THE ENGINEER. FLAGGERS SHOULD BE VISIBLE AND DISCERNABLE AS A FLAGGER FROM A MINIMUM DISTANCE OF 1,000'.
7. MAINTAIN EXISTING LANE WIDTHS AT ALL TIMES. DEVICES SHALL BE OFFSET FROM LANE/EDGE LINES BY A MINIMUM OF 2'. THE TRAFFIC CONTROL SUPERVISOR MAY FIELD-ADJUST DEVICES UP TO THE LANE/EDGE LINE IF NEEDED, BUT DEVICES SHALL NOT ENCR OACH INTO THE OPEN LANE. WHERE EXISTING LANE WIDTHS CANNOT FEASIBLY BE MAINTAINED, LANE WIDTHS SHALL BE 11' MINIMUM AT ALL TIMES, UNLESS OTHERWISE NOTED IN THESE PLANS.
8. DEVICE SPACING AT CORNERS SHALL BE A MAXIMUM OF 8' APART. THE TRAFFIC CONTROL SUPERVISOR MAY FIELD-ADJUST DEVICES TO PROVIDE TIGHTER SPACING FOR THE PROTECTION OF ROADSIDE FEATURES.
9. WHERE STEEL PLATES ARE NECESSARY TO COVER AN EXCAVATION WITHIN THE ROADWAY, EACH SIDE OF THE PLATE SHALL HAVE A MINIMUM 12" BEARING ON THE SIDES OF THE EXCAVATION. PLATES SHALL BE ANCHORED AND BEDDED ON TEMPORARY PAVEMENT PATCH MATERIAL, SHIMMED TO PREVENT MOVEMENT, ORIENTED PERPENDICULAR TO TRAFFIC, WITH BEDDING TAPERED ON ALL SIDES TO PROVIDE SMOOTH TRANSITION FOR ALL USERS. PLATES SHALL BE TEXTURED TO PROVIDE A NON-SKID SURFACE AS APPROVED BY THE ENGINEER. PLATES SHALL BE DELINEATED WITH PAINT AT ITS EDGES AND WARNING SIGN(S) W8-24 (STEEL PLATE AHEAD) INSTALLED AS DIRECTED BY THE ENGINEER.
10. TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE CRASHWORTHY AND COMPLY WITH MUTCD PART 6.
11. CHANNELIZATION DEVICES USED DURING HOURS OF DARKNESS SHALL HAVE RETROREFLECTIVE BANDS. ADD STEADY-BURN LIGHTS ON ARTERIALS.
12. EXISTING SIGNAGE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SIGNAGE SHALL BE REMOVED OR SECURELY COVERED BY A METHOD APPROVED BY THE ENGINEER.
13. TEMPORARY TRAFFIC CONTROL SIGNS IN PLACE AT ONE LOCATION CONTINUOUSLY FOR LONGER THAN THREE DAYS SHALL BE CLASS A.
14. SIGNS SHALL BE BLACK LEGEND ON ORANGE BACKGROUND, UNLESS OTHERWISE NOTED IN THESE PLANS.
15. DIAMOND SHAPED WARNING SIGNS SHALL BE 48" X 48", UNLESS OTHERWISE NOTED IN THESE PLANS.
16. SIGNS MOUNTED TO TYPE 3 BARRICADES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
17. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) BOARDS SHOULD BE LOCATED BEHIND GUARDRAIL OR BARRIER WHEREVER FEASIBLE. PCMS BOARDS NOT LOCATED BEHIND GUARDRAIL OR BARRIER SHALL HAVE A TAPER CONSISTING A MINIMUM OF 3 CHANNELIZATION DEVICES IN ADVANCE OF THE PCMS BOARD. PCMS BOARDS SHALL BE REMOVED WHEN NOT DISPLAYING ANY MESSAGES.
18. TYPE 3 BARRICADES SHALL BE IN ACCORDANCE WITH THE MUTCD SECTION 6F.63.
19. PROVIDE PEDESTRIAN AND BICYCLE TRAFFIC WITH AN ALTERNATE ROUTE WHEN EXISTING FACILITIES ARE INTERRUPTED BY CONSTRUCTION ACTIVITIES. ALTERNATIVE ROUTES SHALL BE CLEARLY DELINEATED AND SEPARATED FROM THE CONSTRUCTION ACTIVITIES.

CHANNELIZATION DEVICE SPACING (FT)		
MPH	TAPER	TANGENT
50 / 65	40	80
35 / 45	30	60
25 / 30	20	40

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ±
URBAN STREETS	25 MPH OR LESS	100' ±

LANE WIDTH (FT)	POSTED SPEED (MPH)									
	20	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840



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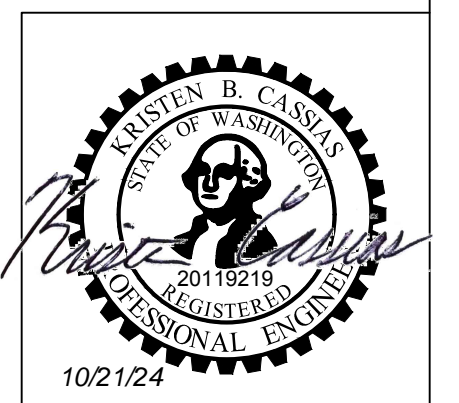
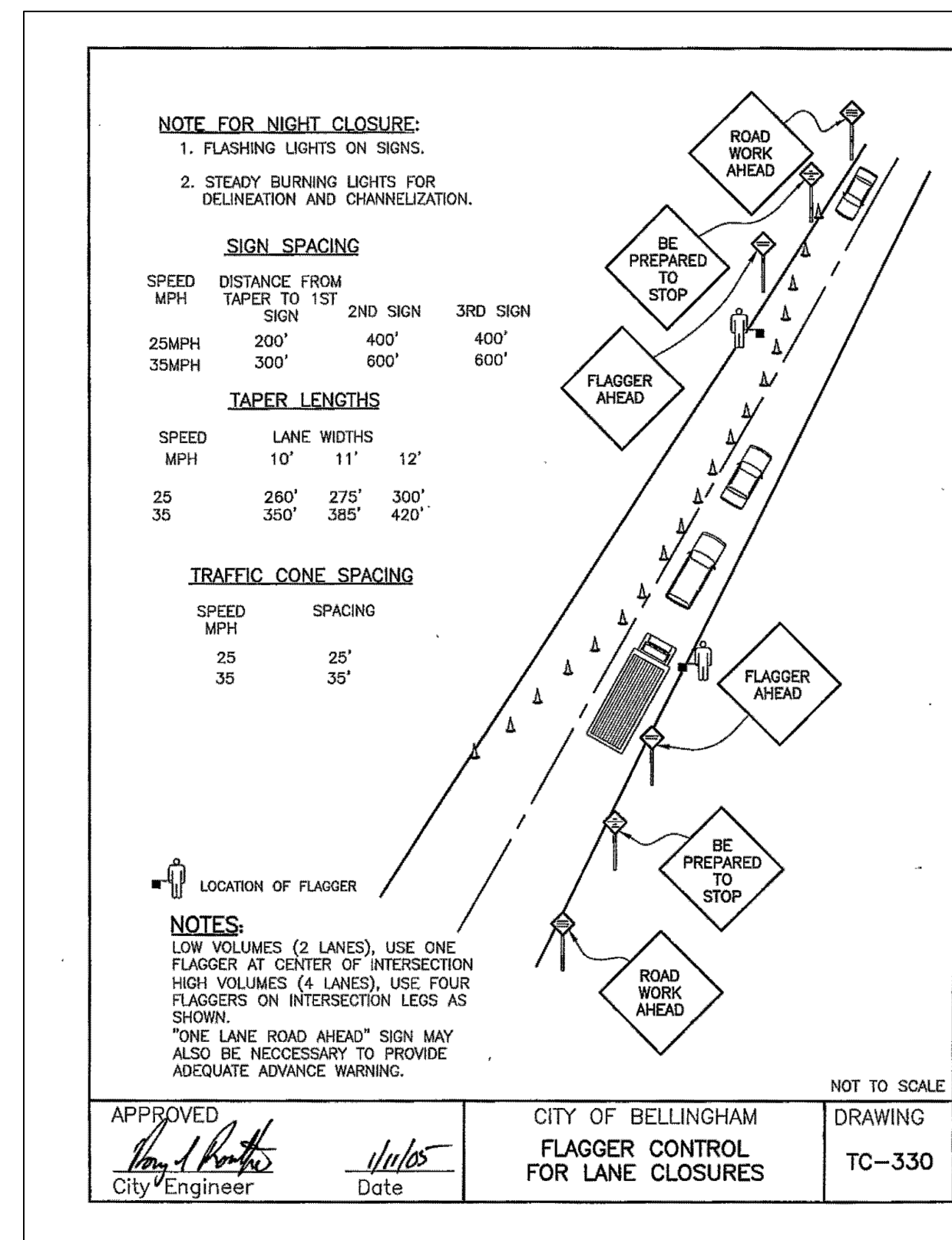
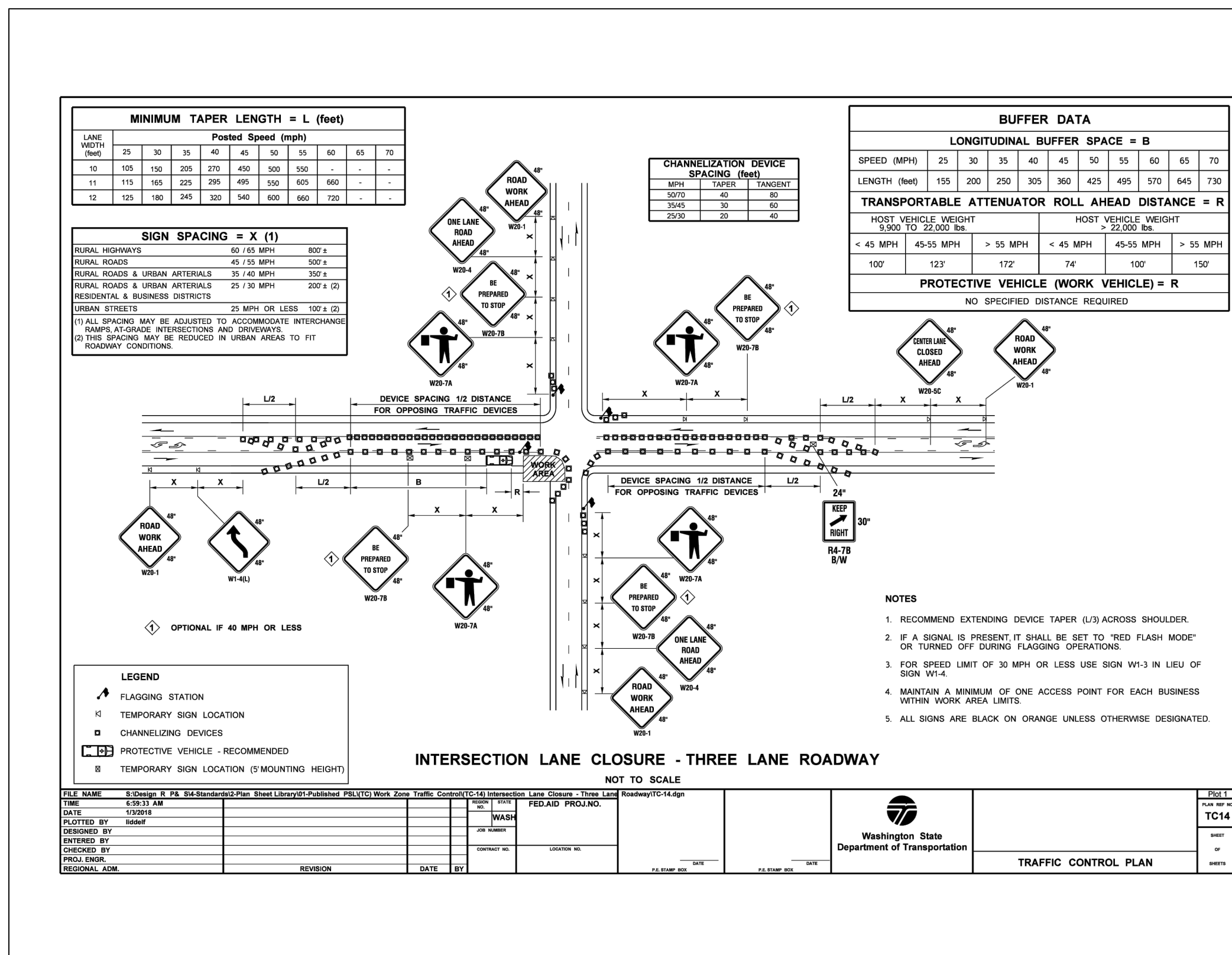
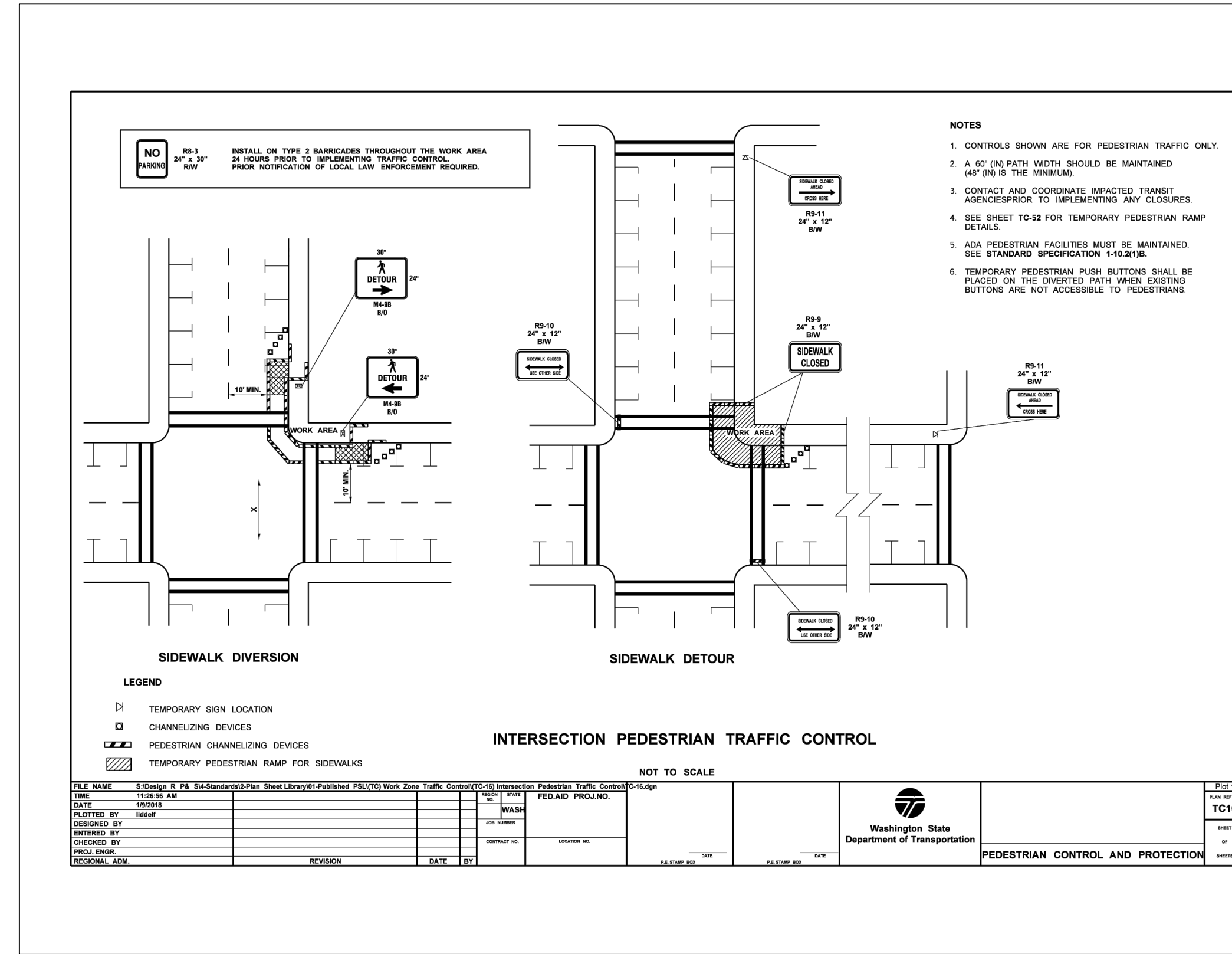
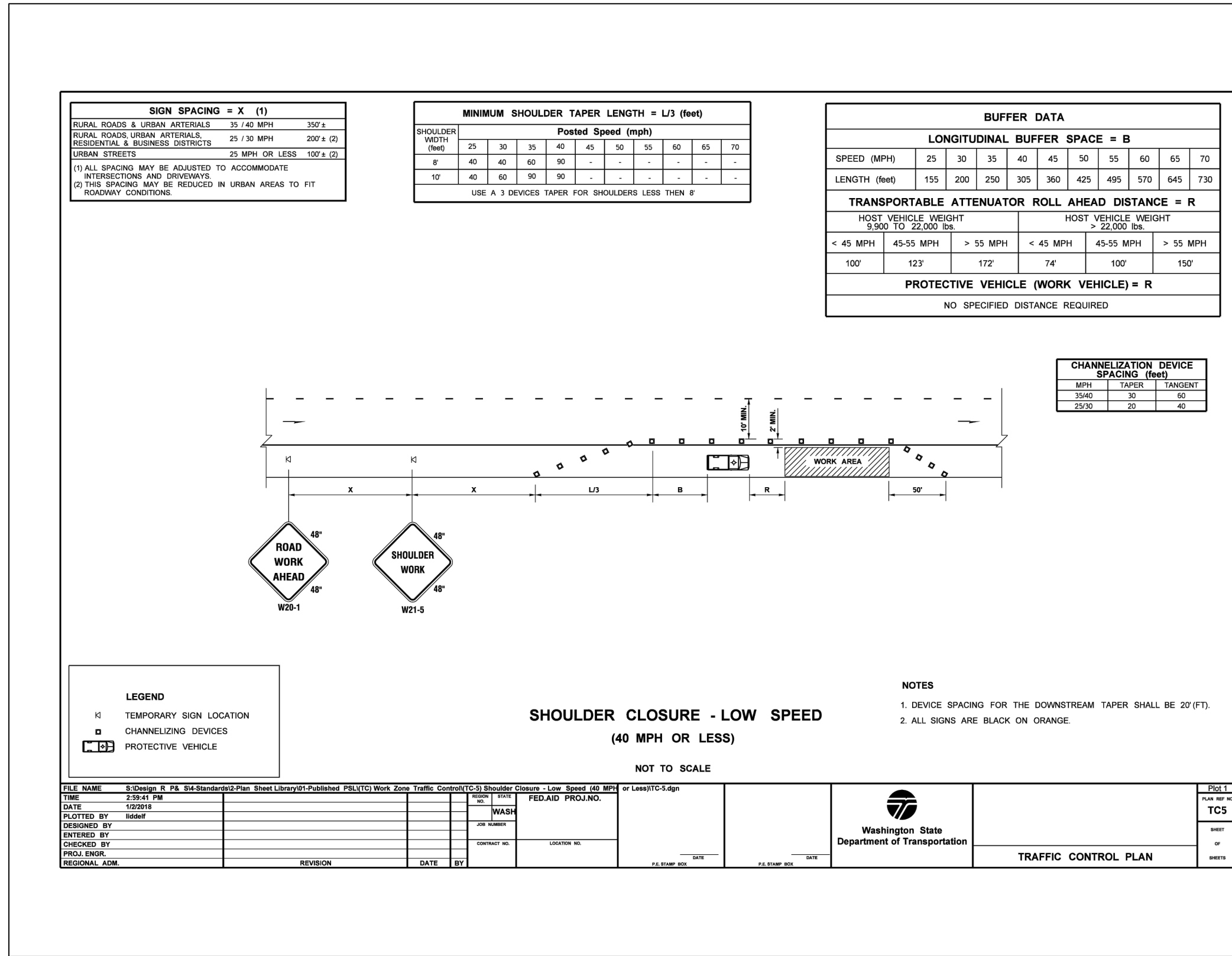
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4																		
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12TH AND FINNEGAN MULTIMODAL SAFETY IMPROVEMENTS
TRAFFIC CONTROL DETAILS

SHEET 51 OF 51