

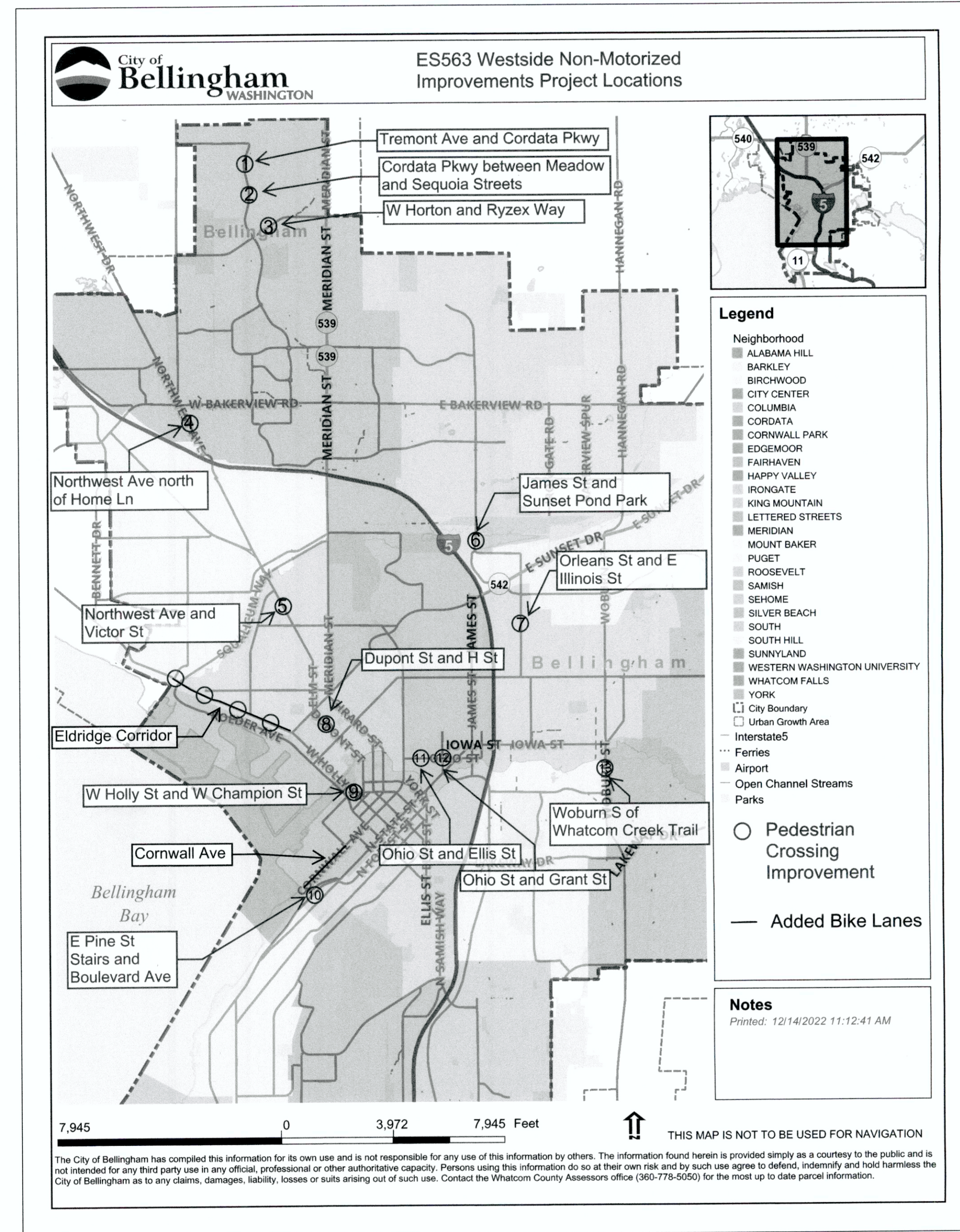
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# ES563 West Side Non-Motorized Improvements

## CITY OF BELLINGHAM, WASHINGTON

### VICINITY MAP



SURVEYOR  
 JEPSON AND ASSOCIATES  
 222 GRAND AVENUE  
 (360) 733-5760



Date	No	Revision	By
	4		
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	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SHEET INDEX AND VICINITY MAP

SHEET 1 OF 45

**GENERAL NOTES**

- 1) ALL WORK SHALL CONFORM TO THE LATEST EDITION OF "STANDARD SPECIFICATIONS FOR ROAD BRIDGE AND MUNICIPAL CONSTRUCTION" CURRENT EDITION (WSDOT) AND THE "CITY OF BELLINGHAM DEVELOPMENT GUIDELINES AND IMPROVEMENT STANDARDS" UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY SPECIFICATIONS OR STANDARDS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL. ALL REFERENCES TO "SPECIFICATION SECTIONS" REFER TO THE "STANDARD SPECIFICATIONS FOR ROAD BRIDGE AND MUNICIPAL CONSTRUCTION" UNLESS OTHERWISE NOTED.
- 2) THE BEDDING FOR PVC PIPE SHALL BE PEA GRAVEL, ACCORDING TO CITY OF BELLINGHAM STANDARD PLAN No. SS-750. ALL TRENCH BACKFILL UNDER EXISTING OR FUTURE PAVING SHALL BE BANK RUN GRAVEL FOR TRENCH BACKFILL AND SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY (MODIFIED PROCTOR).
- 3) PLUG ALL CULVERTS, SEWERS, AND CONDUITS PRIOR TO ABANDONMENT. AS PER STANDARD SPECIFICATIONS SECTION 7-08.3(4)
- 4) ALL LAWN AND VEGETATED AREAS OUTSIDE THE PROJECT LIMITS DISTURBED BY CONSTRUCTION EQUIPMENT, VEHICLES OR PERSONNEL SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, AT THE CONTRACTORS EXPENSE.
- 5) THIS PROJECT MAY REQUIRE VARIOUS PERMITS AS OUTLINED IN THE PROJECT SPECIFICATION'S GENERAL PROVISIONS. ALL WORK SHALL BE PERFORMED IN A MANNER WHICH ENSURES CONFORMANCE WITH ANY PERMIT REQUIREMENTS.
- 6) THE CONTRACTOR SHALL ATTEND PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF BELLINGHAM ENGINEERING DIVISION PRIOR TO BEGINNING CONSTRUCTION.
- 7) UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN THE AREA OF CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY OWNERS FOR LOCATIONS AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS: 1-800-424-5555.
- 8) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ADJACENT UTILITIES WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, WATER, SEWER, STORM SEWER, POWER, TELEPHONE, CABLE TV, GAS, IRRIGATION, AND STREET LIGHTING.
- 9) 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.
- 10) PUBLIC RIGHTS-OF-WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE CONDITION AT ALL TIMES. IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEEPED AND REMOVED WITH A VACUUM SWEEPER.
- 11) PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION. NO MATERIAL IS TO BE DISCHARGED TO, OR DEPOSITED IN STORMWATER SYSTEMS THAT MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.
- 12) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING, MAINTAINING, & REMOVING EROSION CONTROL MEASURES (SILT FENCE, ROCK CHECK DAMS, SILT PONDS, CATCH BASIN FILTERS, ETC..) THROUGHOUT THE DURATION OF THE PROJECT. ALL EROSION CONTROL WORK IS CONSIDERED INCIDENTAL TO THE ITEMS OF WORK IN THE CONTRACT FOR THIS PROJECT. REFER TO THE 'STORM WATER POLLUTION PREVENTION PLAN' SHEETS AND BID ITEMS NOTED IN THE CONTRACT PORTION OF THE PROJECT SPECIFICATIONS FOR SPECIFIC EROSION CONTROL NOTES.
- 13) CONTRACTOR SHALL TAKE NECESSARY PRECAUTION 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 SURVEY PRACTICES BY A LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER PRIOR TO DESTRUCTION.

**STORM NOTES**

- 20) BEDDING AND BACKFILL FOR PVC STORM MAIN PIPE SHALL CONFORM TO CITY OF BELLINGHAM STANDARD PLAN No. DR-538.
- 21) STORM MAIN CLEANOUTS SHALL CONFORM TO CITY OF BELLINGHAM STANDARD NO. SS-720

**EROSION CONTROL NOTES**

- 60) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REMOVAL OF ALL EROSION CONTROL MEASURES (SILT FENCE, STRAW BALE DAMS, SILT PONDS, ETC., AS DIRECTED BY THE ENGINEER) THROUGHOUT THE DURATION OF THE PROJECT.
- 61) IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEEPED AND REMOVED PRIOR TO ANY STREET FLUSHING. PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION. NO MATERIAL IS TO BE DISCHARGED OR DEPOSITED IN STORMWATER SYSTEMS THAT MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.
- 62) THE CONTRACTOR IS REQUIRED TO PREPARE AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A COPY OF THE SWPPP SHALL BE ON SITE THROUGHOUT THE DURATION OF CONSTRUCTION.
- 63) STABILIZE SOILS- ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY APPLICATION OF EFFECTIVE BEST MANAGEMENT PRACTICES, THAT PROTECT THE SOIL FROM THE EROSION FORCES OF WATER AND WIND. NO UNWORKED SOILS SHALL REMAIN EXPOSED FOR MORE THAN SEVEN (7) DAYS.
- 64) SAWCUTTING SLURRY AND CUTTINGS SHALL BE VACUUMED DURING CUTTING AND SURFACING OPERATIONS. SLURRY AND CUTTINGS SHALL NOT REMAIN ON PAVEMENT OVERNIGHT.
- 65) INLET PROTECTION MUST BE PROVIDED FOR ALL EXISTING CATCH BASINS DURING CONSTRUCTION. ALL CATCH BASINS WITHIN THE PROJECT LIMITS SHALL BE CLEANED OUT AT THE COMPLETION OF THE PROJECT AND ANY MATERIAL REMOVED SHALL BE PROPERLY DISPOSED OF.
- 66) DURING ANY DITCH, CREEK & DRAINAGE WORK WATER SHALL BE DIVERTED AROUND THE PROJECT WITH A PUMP OR OTHER ADEQUATE METHOD APPROVED BY THE ENGINEER.
- 67) ANY MISCELLANEOUS DRAINAGE FOUND WILL BE REQUIRED TO BE REMOVED OR CONNECTED TO THE NEW DRAINAGE SYSTEM WITH THE DIRECTION OF THE ENGINEER. DISTURBED SOILS ARE TO BE MULCHED.

**SURVEY MONUMENT AND BENCHMARK NOTE:**

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 THE PROJECT ENGINEER PRIOR TO DESTRUCTION.

LEGEND					
	EXISTING	PROPOSED		EXISTING	PROPOSED
RIGHT OF WAY LINE	---	---	UNDERGROUND POWER	---	---
PROPERTY LINE	---	---	UTILITY POLE	○	○
CENTER LINE	---	---	SIGN	△	△
WATER MAIN	---	---	SIDEWALK	---	---
WATER SERVICE	---	---	CURB & GUTTER	---	---
WATER VALVE	○	○	EDGE OF PAVEMENT	---	---
FIRE HYDRANT	○	○	EDGE OF GRAVEL/DIRT	---	---
SANITARY SEWER MAIN	---	---	ADA RAMP	---	---
SANITARY SEWER SERVICE	---	---	BUILDING LINE	---	---
STORM SEWER MAIN	---	---	TREE LINE	---	---
STORM SEWER SERVICE	---	---	FENCE LINE	---	---
SEWER MANHOLE	○	○	WALL LINE (ROCK)	---	---
STORM MANHOLE	○	○	WALL LINE	---	---
CATCH BASIN	□	□	SHRUBS	---	---
CULVERT	---	---	TREES	---	---
DRAINAGE DITCH	---	---	RIP RAP	---	---
CREEK	---	---	STREET LIGHT JUNCTION BOX	---	---
GAS MAIN	---	---	TRAFFIC JUNCTION BOX	---	---
GAS SERVICE	---	---	LUMINAIRE (STREET LIGHT)	---	---
UNDERGROUND TELEPHONE	---	---	SIGNAL POLE	---	---
FIBER OPTIC LINE	---	---	PEDESTRIAN SIGNAL	---	---
MONUMENT PER COB	○	○	RRFB AS NOTED ON PLANS	---	---
FOUND MONUMENT	○	○	LANDSCAPING(SOIL, SOD OR MULCH)	---	---
BENCHMARK	○	○			
FOUND NAIL/SURVEY CONTROL POINT	△	△			

Date	No	Revision	By
	4		
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PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

Job No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
**GENERAL NOTES AND LEGEND**

SHEET 2 OF 45



24 May 2023

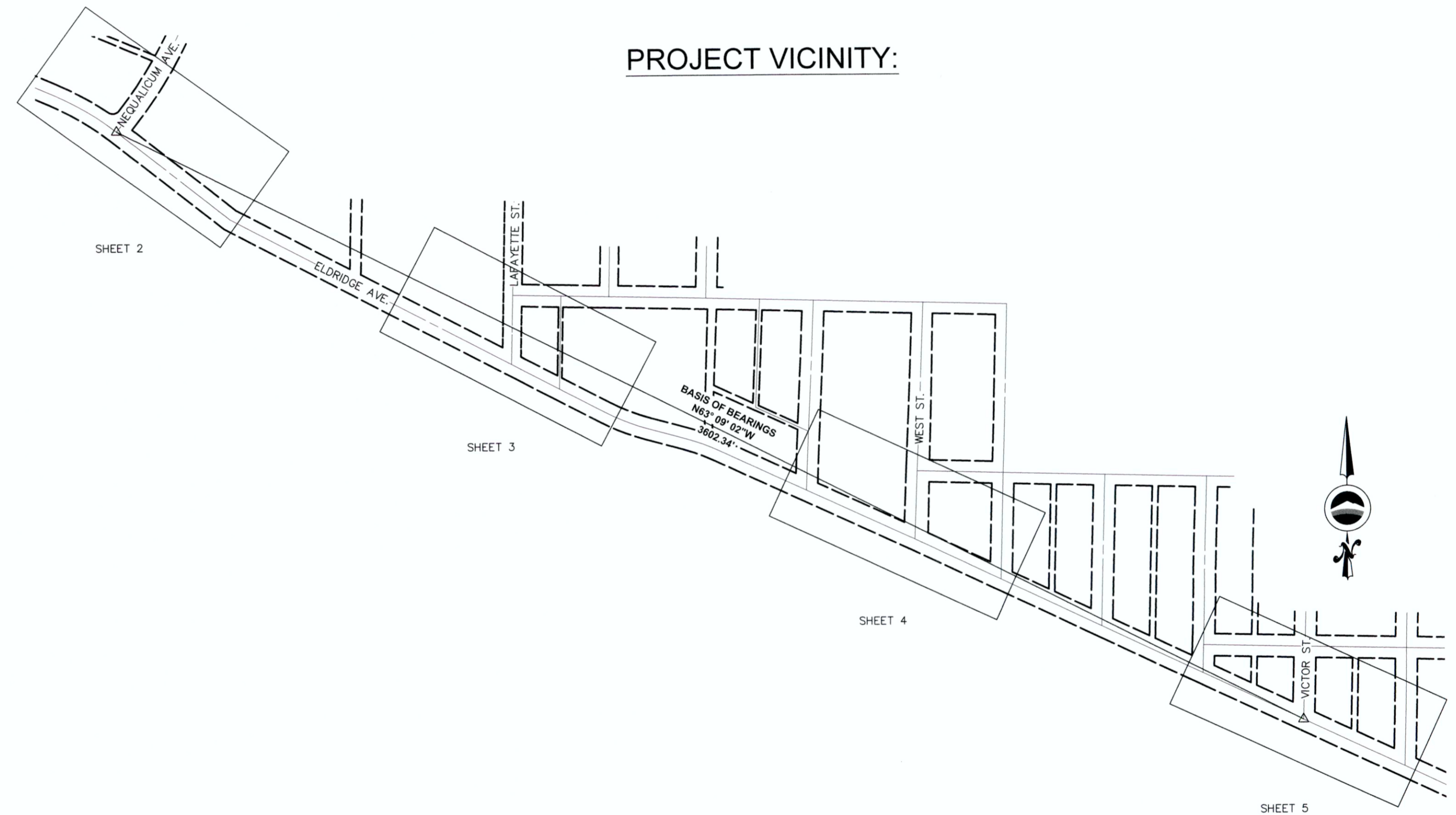
# WEST SIDE NON-MOTORIZED IMPROVEMENTS

## CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563 SURVEY CONTROL WORKSHEET

### SURVEYOR'S NOTES:

- HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE  
LINE HELD: **N63°09'02"W 3602.34'** BETWEEN FOUND BRASS DISKS (COB 706 AND 718) IN THE CENTERLINE OF ELDRIDGE AVE., AS SHOWN.
- VERTICAL DATUM:** NAVD88  
PROJECT BENCHMARKS:  
PT #801 (COB 5848) FND 2" BRASS DISK IN BRIDGE HEADWALL EL=67.42' (HELD)  
PT# 805 (COB 3513) FND GIN SPIKE IN POWER POLE EL=68.71'
- DATE OF SURVEY: **JANUARY 25-27 & 31 AND FEBRUARY 1, 2023**
- PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.
- THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.
- THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
- SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.
- JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.
- THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH. SEE A RECORD OF SURVEY OR PLAT MAP.

### PROJECT VICINITY:



### SHEET INDEX:

- SHEET 1: COVER SHEET & NOTES
- SHEET 2: SURVEY CONTROL MAP - ELDRIDGE & NEQUALICUM
- SHEET 3: SURVEY CONTROL MAP - ELDRIDGE & LAFAYETTE
- SHEET 4: SURVEY CONTROL MAP - ELDRIDGE & WEST
- SHEET 5: SURVEY CONTROL MAP - ELDRIDGE & VICTOR

### LEGEND:

- △ SURVEY CONTROL
- SET 1/2" REBAR/CAP



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Date	No	Revision	By

PROJECT ENGINEER	_____
DESIGNED/DRAWN	_____
INSPECTOR	_____

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

**CITY OF BELLINGHAM, WASHINGTON**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

**SCALE**  
Horiz. 1"=250'  
Vert. 1"=5'

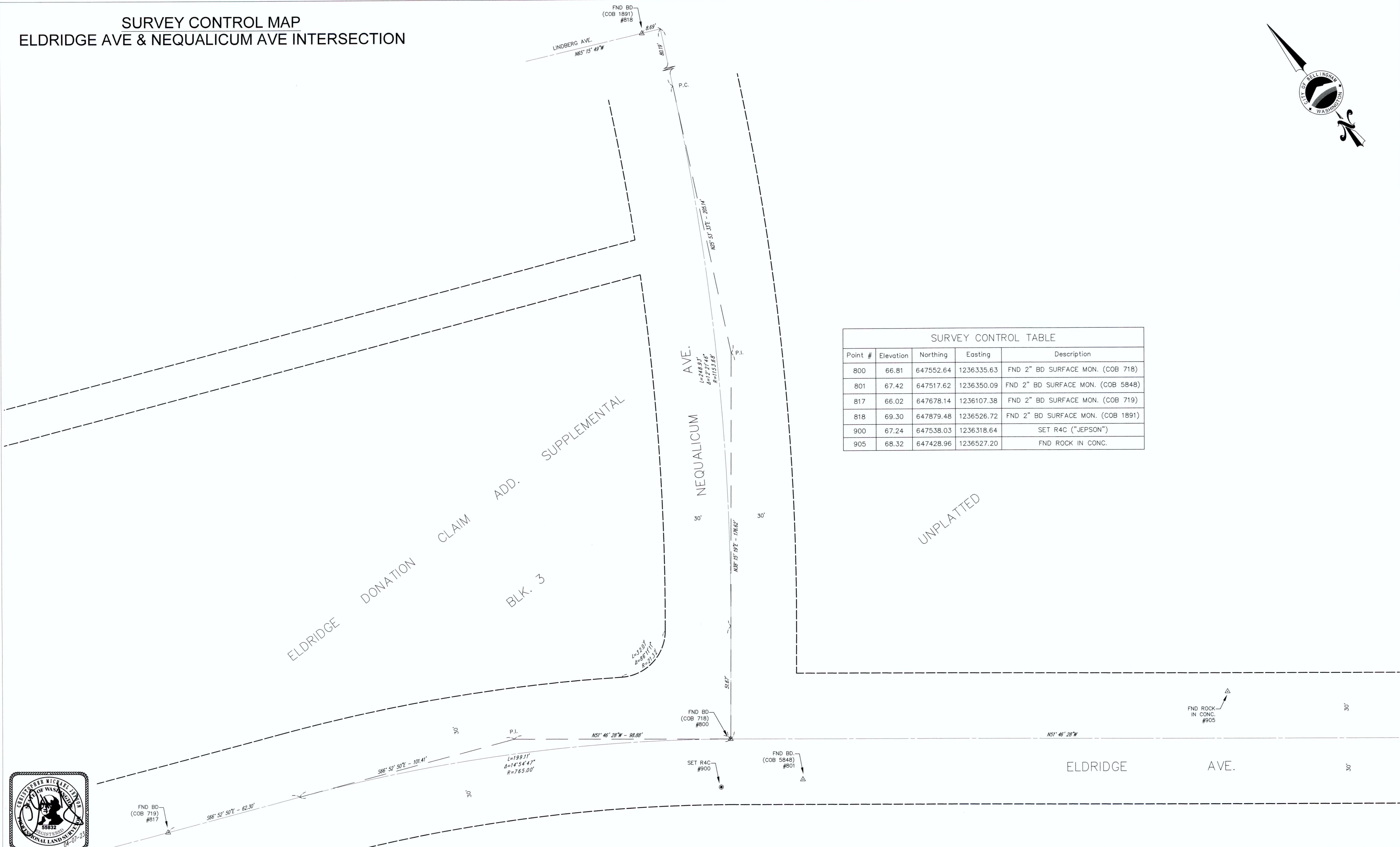
**DATUM**  
NAD 83/98  
NAVD 88

Job. No. ES563  
Date 04/07/2023  
Field Bk. MAP19\_DGB21&22

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
SURVEY CONTROL ELDRIDGE AVE.

SHEET 3 OF 45

# SURVEY CONTROL MAP ELDRIDGE AVE & NEQUALICUM AVE INTERSECTION



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
800	66.81	647552.64	1236335.63	FND 2" BD SURFACE MON. (COB 718)
801	67.42	647517.62	1236350.09	FND 2" BD SURFACE MON. (COB 5848)
817	66.02	647678.14	1236107.38	FND 2" BD SURFACE MON. (COB 719)
818	69.30	647879.48	1236526.72	FND 2" BD SURFACE MON. (COB 1891)
900	67.24	647538.03	1236318.64	SET R4C ("JEPSON")
905	68.32	647428.96	1236527.20	FND ROCK IN CONC.



Date	No	Revision	By
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PROJECT ENGINEER _____	DIRECTOR PUBLIC WORKS E.C.J. _____
DESIGNED/DRAWN _____	CITY ENGINEER C.M.A.S. _____
INSPECTOR _____	ASSISTANT DIRECTOR M.A.O. _____

**CITY OF BELLINGHAM, WASHINGTON**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

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

**DATUM**  
NAD 83/98  
NAVD 88

Job. No. ES563  
Date 04/07/2023  
Field Bk. MAP19\_DGB21&22

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
SURVEY CONTROL ELDRIDGE AVE.

SHEET 4 OF 45

**SURVEY CONTROL MAP  
ELDRIDGE AVE & LAFAYETTE ST. INTERSECTION**



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
802	68.19	646896.47	1237428.82	FND 2" BD SURFACE MON. (COB 716)
813	67.06	646776.18	1237656.94	FND 2" BD SURFACE MON. (COB 715)
814	69.01	647144.07	1236959.06	FND 2" BD SURFACE MON. (COB 717)
815	68.93	647098.14	1237408.27	FND 2" BD SURFACE MON. (COB 1064)
816	68.29	646909.50	1237404.09	FND NAIL/SHINER (COB 6153)
902	67.58	646918.98	1237428.14	SET 1/2" REBAR/CAP ("JEPSON")



Date	No	Revision	By
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PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

DIRECTOR PUBLIC WORKS E.C.J. \_\_\_\_\_  
 CITY ENGINEER C.M.A.S. \_\_\_\_\_  
 ASSISTANT DIRECTOR M.A.O. \_\_\_\_\_

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

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

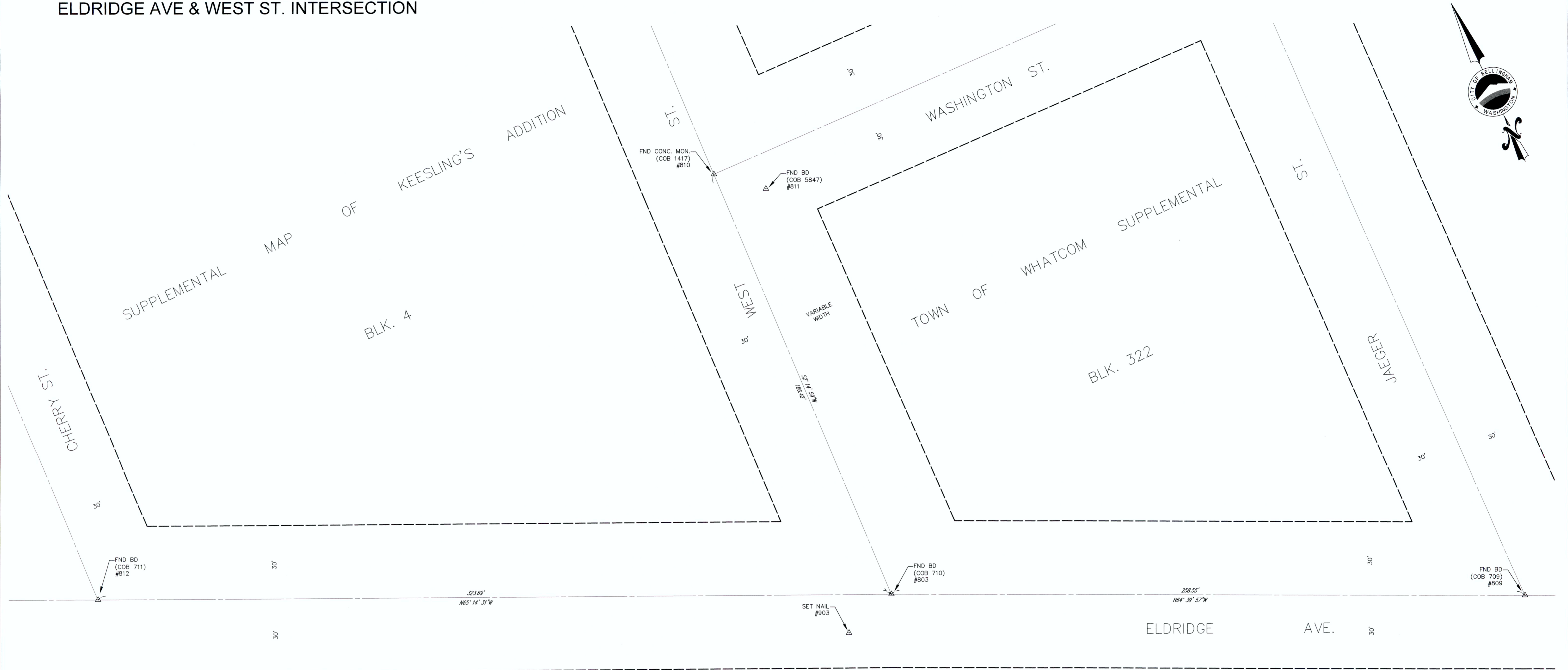
**DATUM**  
 NAD 83/98  
 NAVD 88

Job No. ES563  
 Date 04/07/2023  
 Field Bk. MAP19\_DGB21822

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL ELDRIDGE AVE.

SHEET 5 OF 45

**SURVEY CONTROL MAP  
ELDRIDGE AVE & WEST ST. INTERSECTION**



**SURVEY CONTROL TABLE**

Point #	Elevation	Northing	Easting	Description
803	69.66	646423.95	1238497.42	FND 2" BD SURFACE MON (COB 710)
809	69.44	646313.29	1238731.09	FND 2" BD SURFACE MON. (COB 709)
810	69.48	646610.21	1238504.74	FND CONC. MON. (COB 1417)
811	69.85	646595.79	1238521.41	FND BD BM (COB 5847)
812	67.87	646559.51	1238203.53	FND BD SURFACE MON. (COB 711)
903	68.81	646417.06	1238475.04	SET NAIL



Date	No	Revision	By
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PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

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

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

**DATUM**  
 NAD 83/98  
 NAVD 88

Job. No. ES563  
 Date 04/07/2023  
 Field Bk. MAP19\_DGB21&22

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL ELDRIDGE AVE.

**SHEET**  
 6 OF  
 45

**SURVEY CONTROL MAP  
ELDRIDGE AVE & VICTOR ST. INTERSECTION**



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
804	68.90	645925.66	1239549.63	FND 2" BD SURFACE MON (COB 706)
805	68.71	645912.02	1239531.26	FND GIN SPIKE IN PP (COB 3513)
806	67.02	645796.65	1239822.01	FND BD SURFACE MON. (COB 702)
807	70.79	646123.37	1239554.53	FND BD SURFACE MON. (COB 1080)
808	70.49	646054.75	1239276.98	FND BD SURFACE MON. (COB 707)
904	68.24	645960.37	1239514.30	SET NAIL



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Date	No	Revision	By

PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

DIRECTOR PUBLIC WORKS E.C.J. \_\_\_\_\_  
 CITY ENGINEER C.M.A.S. \_\_\_\_\_  
 ASSISTANT DIRECTOR M.A.O. \_\_\_\_\_

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

**DATUM**  
 NAD 83/98  
 NAVD 88

Job No. ES563  
 Date 04/07/2023  
 Field Bk. MAP19\_DGB21822

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL ELDRIDGE AVE.

SHEET 7 OF 45

# WEST SIDE NON-MOTORIZED IMPROVEMENTS

## CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563 SURVEY CONTROL WORKSHEET

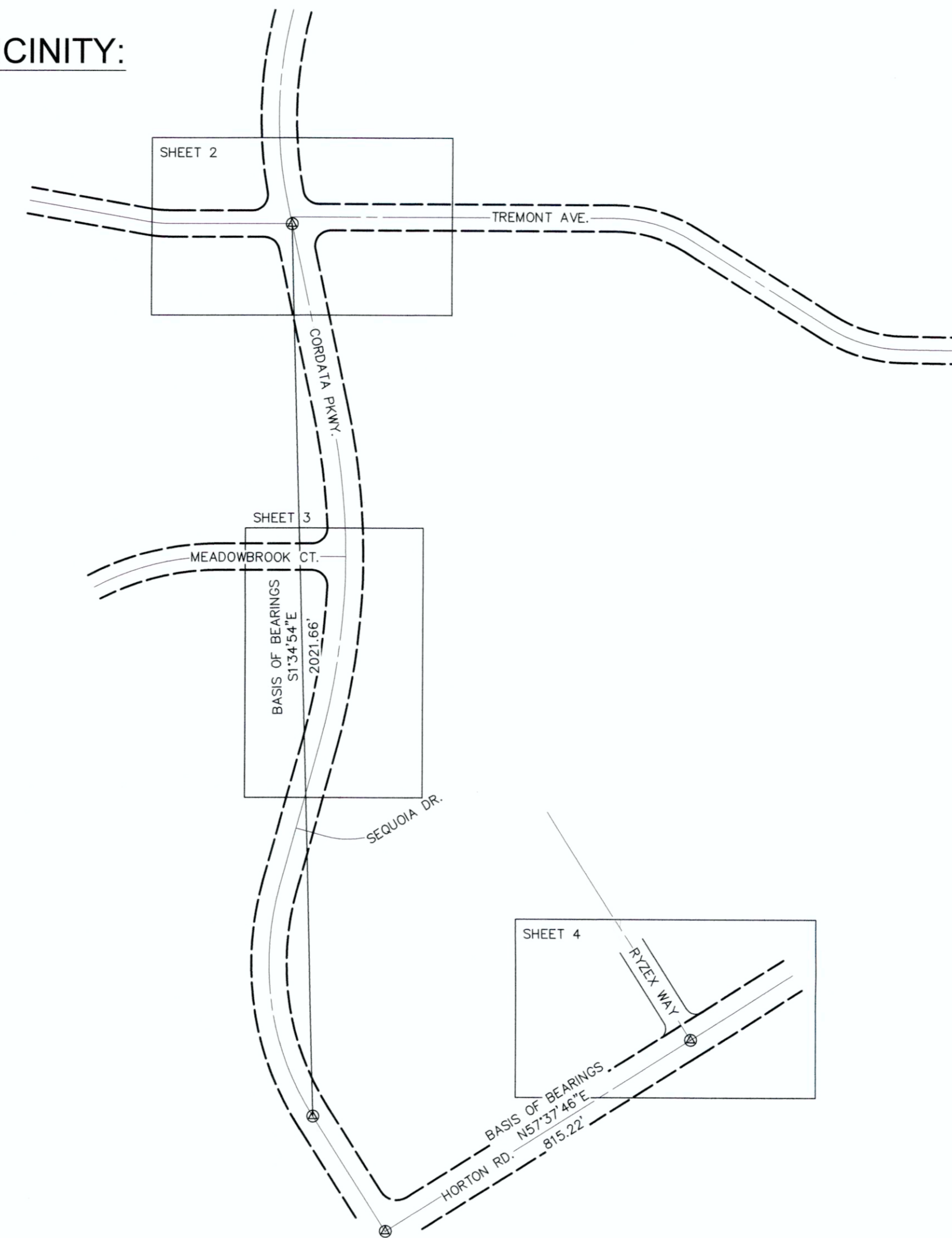
### SURVEYOR'S NOTES:

- HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE  
LINES HELD:  
**S1°34'54"E 2021.66'** BETWEEN FOUND BRASS DISKS (COB 2788 & 3709) IN THE CENTERLINE OF CORDATA PARKWAY, AS SHOWN. (TREMONT & CORDATA SURVEYS)  
**N57°37'46"E 815.22'** BETWEEN FOUND BRASS DISK (COB 2185) AT THE INTERSECTION OF CORDATA PARKWAY AND HORTON RD., AND FOUND BRASS DISK (COB 3036) AT THE INTERSECTION OF HORTON RD. AND RYZEX WAY, AS SHOWN. (RYZEX SURVEY)
- BASIS OF COORDINATES:**  
COB 2788 (#902)      2" BRASS DISK      N: 665397.86    E: 1239342.91  
COB 3709 (#911)      2" BRASS DISK      N: 663376.97    E: 1239398.71
- VERTICAL DATUM:** NAVD88  
PROJECT BENCHMARKS:  
COB 3030 (#919)      FOUND 3" BRASS DISK IN CASE      EL=166.80'  
COB 3036 (#916)      FOUND 2" BRASS DISK              EL=165.36'  
COB 3709 (#911)      FOUND 2" BRASS DISK              EL=162.91' (R=162.90')
- DATE OF SURVEY: **APRIL 13, 14, 17, 18, 19, & 24, 2023**
- PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.
- THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.
- THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
- SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.
- JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.
- THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH. SEE A RECORD OF SURVEY OR PLAT MAP.

### SHEET INDEX:

- SHEET 1: COVER SHEET & NOTES  
SHEET 2: SURVEY CONTROL MAP

### PROJECT VICINITY:



### LEGEND:

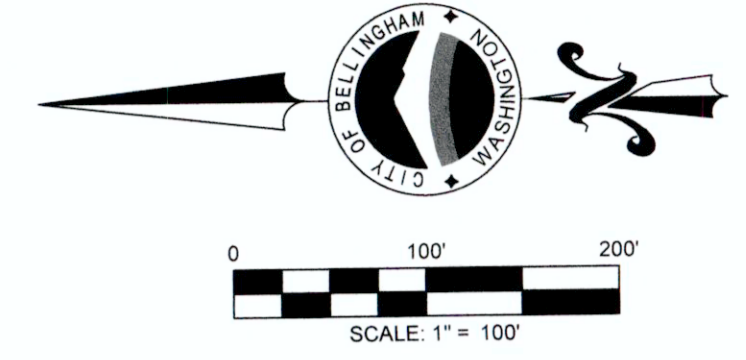
- △ SURVEY CONTROL
- ⊙ FOUND BRASS DISK MON
- BD BRASS DISK



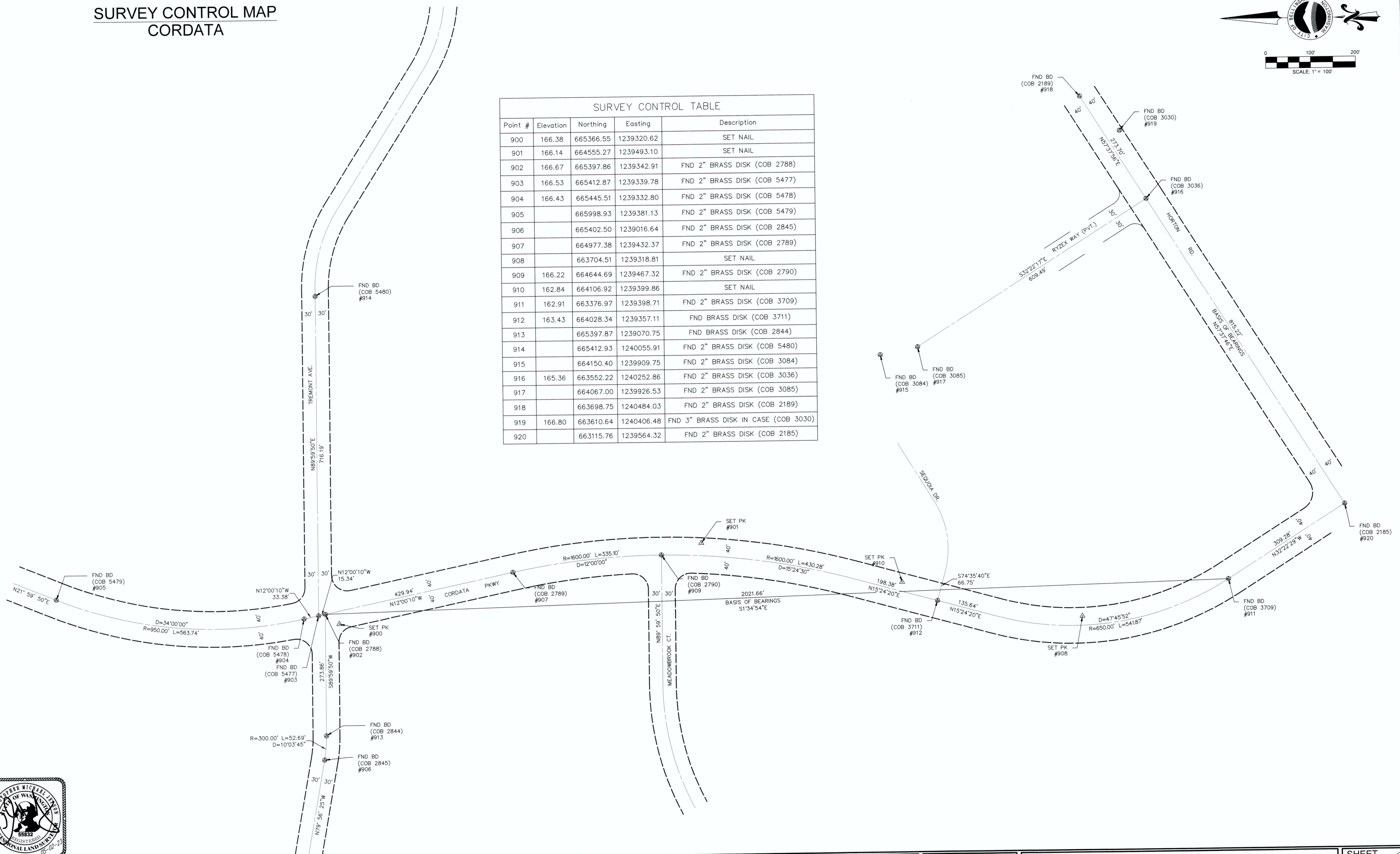
4		PROJECT ENGINEER	DIRECTOR PUBLIC WORKS E.C.J.	CITY OF BELLINGHAM, WASHINGTON	SCALE	DATUM	Job. No. ES563	WEST SIDE NON-MOTORIZED IMPROVEMENTS SURVEY CONTROL CORDATA PKWY.	SHEET 8 OF 45
3		DESIGNED/DRAWN	CITY ENGINEER C.M.A.S.	PUBLIC WORKS DEPARTMENT	Horiz. 1"=250'	NAD 83/98	Date 05/02/2023		
2		INSPECTOR	ASSISTANT DIRECTOR M.A.O.	ENGINEERING DIVISION	Vert. 1"=5'	NAVD 88	Field Bk. 1068-2		
1									
Date	No.	Revision	By						



# SURVEY CONTROL MAP CORDATA



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	166.38	665366.55	1239320.62	SET NAIL
901	166.14	664555.27	1239493.10	SET NAIL
902	166.67	665397.86	1239342.91	FND 2" BRASS DISK (COB 2788)
903	166.53	665412.87	1239339.78	FND 2" BRASS DISK (COB 5477)
904	166.43	665445.51	1239332.80	FND 2" BRASS DISK (COB 5478)
905		665998.93	1239381.13	FND 2" BRASS DISK (COB 5479)
906		665402.50	1239016.64	FND 2" BRASS DISK (COB 2845)
907		664977.38	1239432.37	FND 2" BRASS DISK (COB 2789)
908		663704.51	1239318.81	SET NAIL
909	166.22	664644.69	1239467.32	FND 2" BRASS DISK (COB 2790)
910	162.84	664106.92	1239399.86	SET NAIL
911	162.91	663376.97	1239398.71	FND 2" BRASS DISK (COB 3709)
912	163.43	664028.34	1239357.11	FND BRASS DISK (COB 3711)
913		665397.87	1239070.75	FND BRASS DISK (COB 2844)
914		665412.93	1240055.91	FND 2" BRASS DISK (COB 5480)
915		664150.40	1239909.75	FND 2" BRASS DISK (COB 3084)
916	165.36	663552.22	1240252.86	FND 2" BRASS DISK (COB 3036)
917		664067.00	1239926.53	FND 2" BRASS DISK (COB 3085)
918		663698.75	1240484.03	FND 2" BRASS DISK (COB 2189)
919	166.80	663610.64	1240406.48	FND 3" BRASS DISK IN CASE (COB 3030)
920		663115.76	1239564.32	FND 2" BRASS DISK (COB 2185)



Date	No	Revision	By
	4		
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	2		
	1		

PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

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

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

SCALE  
 Horiz. 1" = 100'  
 Vert. 1" = 5'

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES563  
 Date 05/02/2023  
 Field Bk. 1068-2

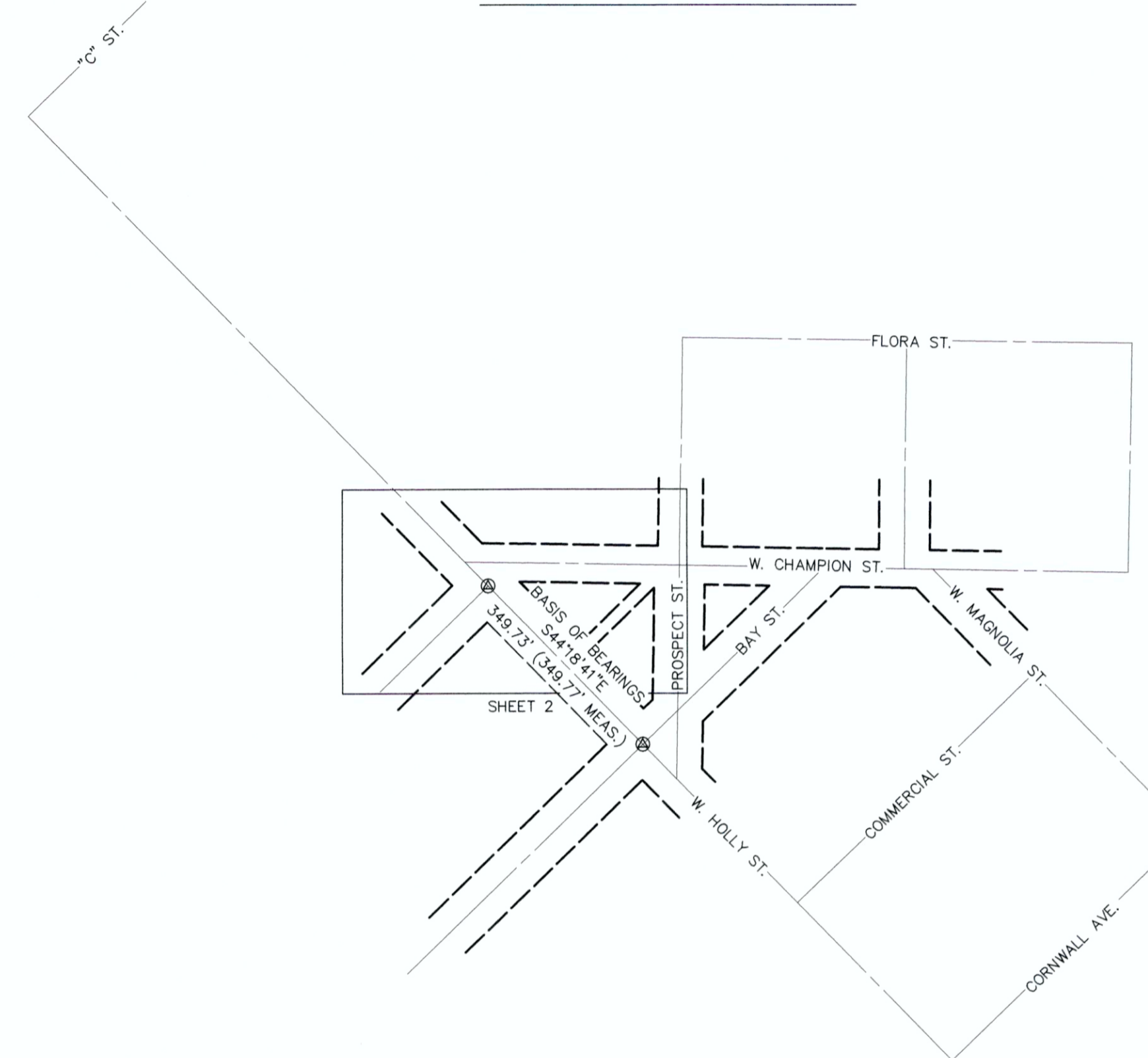
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL CORDATA PKWY.

SHEET 9 OF 45

# WEST SIDE NON-MOTORIZED IMPROVEMENTS

## CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563 SURVEY CONTROL WORKSHEET

### PROJECT VICINITY:



### SURVEYOR'S NOTES:

- HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE  
  
 LINE HELD: **S44°18'41\"/>**
- BASIS OF COORDINATES:**  
  
 COB 2494 (#903) BRASS DISK N: 643281.33 E: 1242631.68  
 COB 803 (#905) BRASS DISK N: 643031.05 E: 1242876.02
- VERTICAL DATUM:** NAVD88  
  
 PROJECT BENCHMARKS:  
  
 COB 5594 (#908) FOUND BRASS DISK BENCHMARK EL=26.15'  
 COB 5869 (#904) FOUND BRASS DISK BENCHMARK EL=61.94'
- DATE OF SURVEY:** APRIL 3 & 12, 2023
- PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.
- THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.
- THIS SURVEY WAS ACCOMPLISHED USING A COMBINATION OF RELATIVE GNSS OBSERVATIONS WITH A BASE/ROVER RTK CONFIGURATION AND STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
- SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5±.
- JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.
- THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

### LEGEND:

- △ SURVEY CONTROL
- ⊙ FOUND CENTERLINE MON.
- ⊙ SEWER MANHOLE
- BD BRASS DISK

### SHEET INDEX:

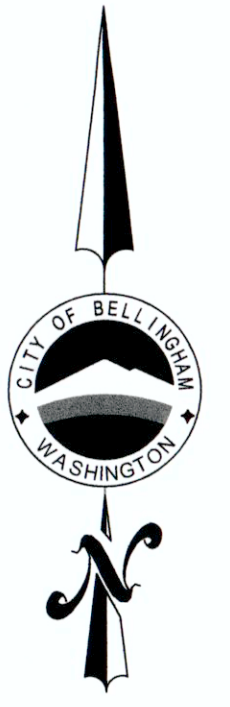
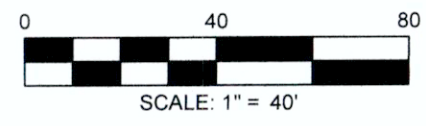
- SHEET 1: COVER SHEET & NOTES  
 SHEET 2: SURVEY CONTROL MAP - HOLLY & CHAMPION



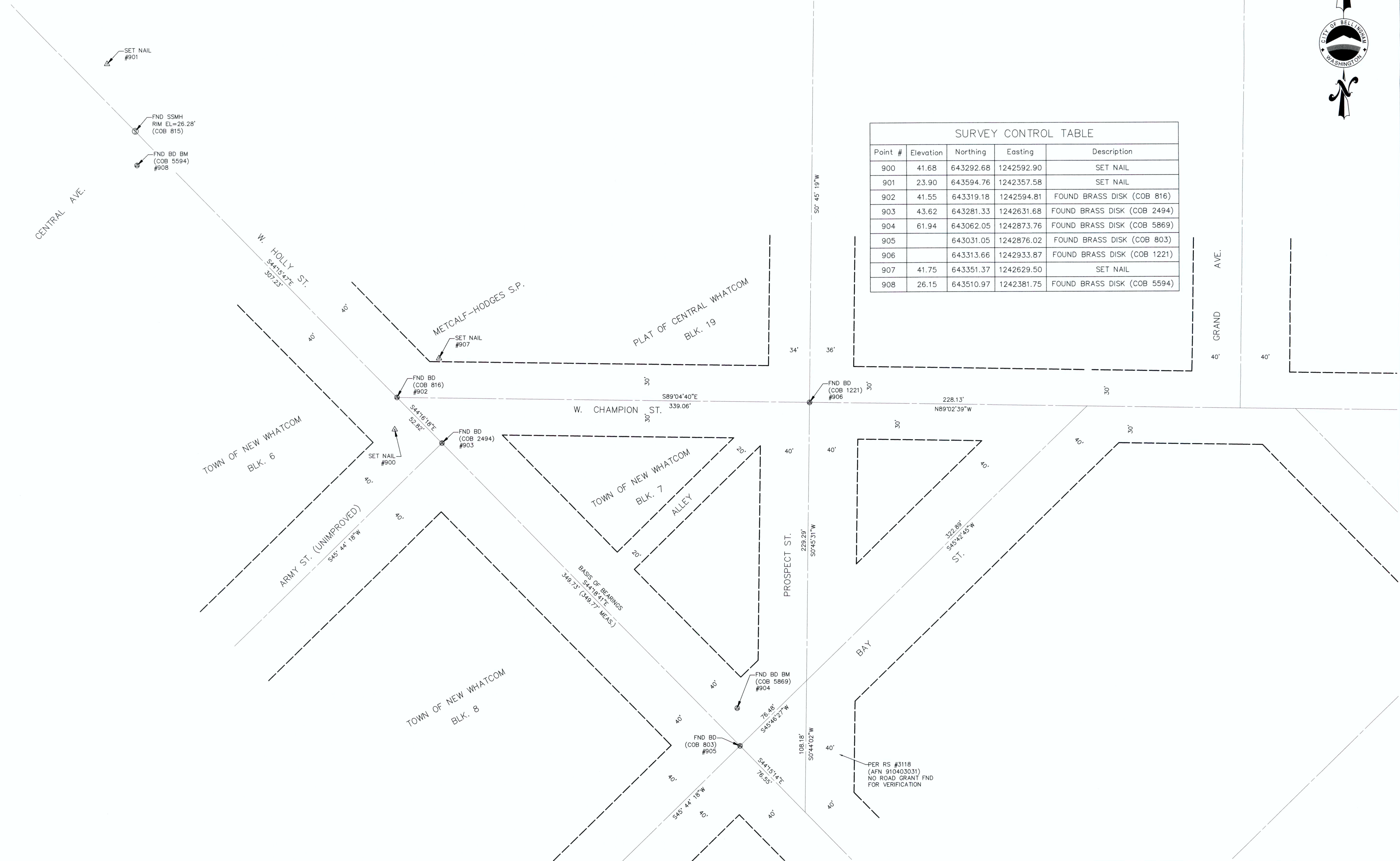
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4																			
3																			
2																			
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Date	No.																		

# SURVEY CONTROL MAP

## W. HOLLY ST. & W. CHAMPION ST. INTERSECTION



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	41.68	643292.68	1242592.90	SET NAIL
901	23.90	643594.76	1242357.58	SET NAIL
902	41.55	643319.18	1242594.81	FOUND BRASS DISK (COB 816)
903	43.62	643281.33	1242631.68	FOUND BRASS DISK (COB 2494)
904	61.94	643062.05	1242873.76	FOUND BRASS DISK (COB 5869)
905		643031.05	1242876.02	FOUND BRASS DISK (COB 803)
906		643313.66	1242933.87	FOUND BRASS DISK (COB 1221)
907	41.75	643351.37	1242629.50	SET NAIL
908	26.15	643510.97	1242381.75	FOUND BRASS DISK (COB 5594)



Date	No	Revision	By

PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

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

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

**SCALE**  
 Horiz. 1" = 40'  
 Vert. 1" = 5'

**DATUM**  
 NAD 83/98  
 NAVD 88

Job. No. ES563  
 Date 05/03/2023  
 Field Bk. 1068-2

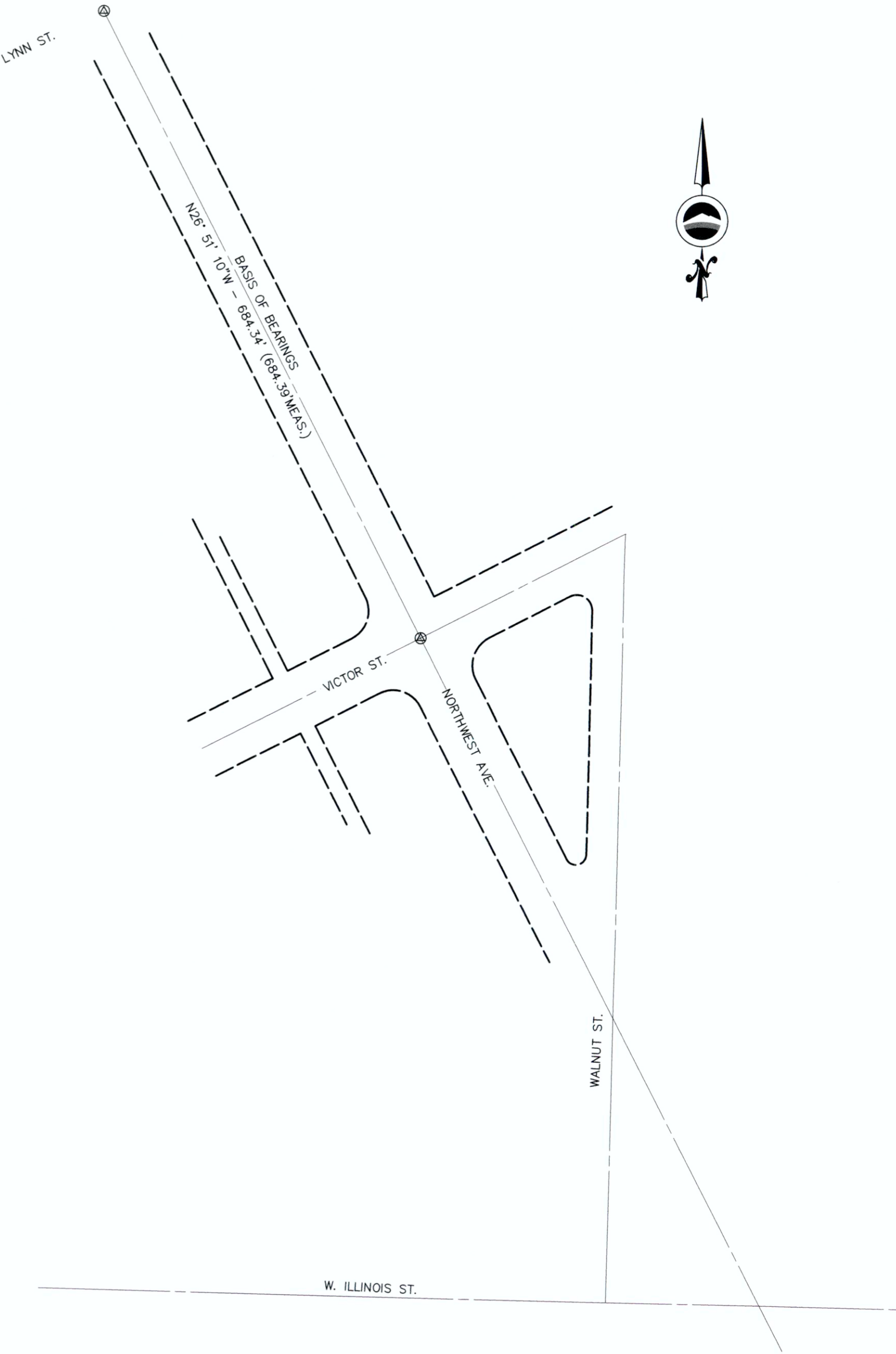
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL W. HOLLY ST. & W. CHAMPION ST.

SHEET 11 OF 45

# WEST SIDE NON-MOTORIZED IMPROVEMENTS

## CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563 SURVEY CONTROL WORKSHEET

**PROJECT VICINITY:**



**SURVEYOR'S NOTES:**

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE  
  
 LINE HELD: **N26°51'10"W 684.34'** (684.39' MEAS.) BETWEEN FOUND BRASS DISK (COB 1156) AT THE INTERSECTION OF NORTHWEST AVE. AND VICTOR ST., AND FOUND BRASS DISK (COB 1155) AT THE INTERSECTION OF NORTHWEST AVE. AND LYNN ST., AS SHOWN.  
  
**BASIS OF COORDINATES:**  
  
 COB 1155 (#907)      2" BRASS DISK      N: 650581.56    E: 1239973.15  
 COB 871 (#911)      CONC. MON W/ PIN    N: 649336.96    E: 1239911.70
2. **VERTICAL DATUM:** NAVD88  
  
 METHOD: CLOSED LOOP DIFFERENTIAL LEVELING  
  
 PROJECT BENCHMARKS:  
  
 COB 5843      BRASS DISK BM      EL=81.24'  
 COB 4693      LIGHT POLE BOLT      EL=82.16'  
 COB 3508      60D NAIL IN UTILITY POLE      EL=81.81'
3. **DATE OF SURVEY:** MARCH 23 & 24 AND APRIL 3, 2023
4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.
5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.
6. THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.
8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.
9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

**LEGEND:**

- △ SURVEY CONTROL
- ⊙ FOUND CENTERLINE MON.
- BD BRASS DISK

**SHEET INDEX:**

- SHEET 1: COVER SHEET & NOTES
- SHEET 2: SURVEY CONTROL WORKSHEET



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3			
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Date	No	Revision	By

PROJECT ENGINEER _____
DESIGNED/DRAWN _____
INSPECTOR _____

DIRECTOR PUBLIC WORKS E.C.J. _____
CITY ENGINEER C.M.A.S. _____
ASSISTANT DIRECTOR M.A.O. _____

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

<b>SCALE</b>
Horiz. 1" = 250'
Vert. N/A

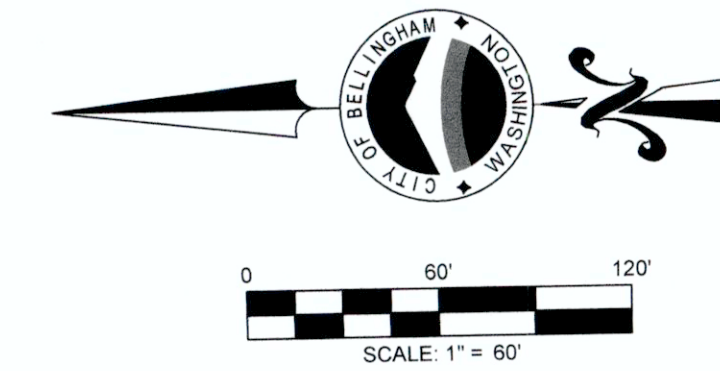
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NAD 83/98
NAVD 88

Job. No. ES563
Date 05/02/2023
Field Bk. 1068-1

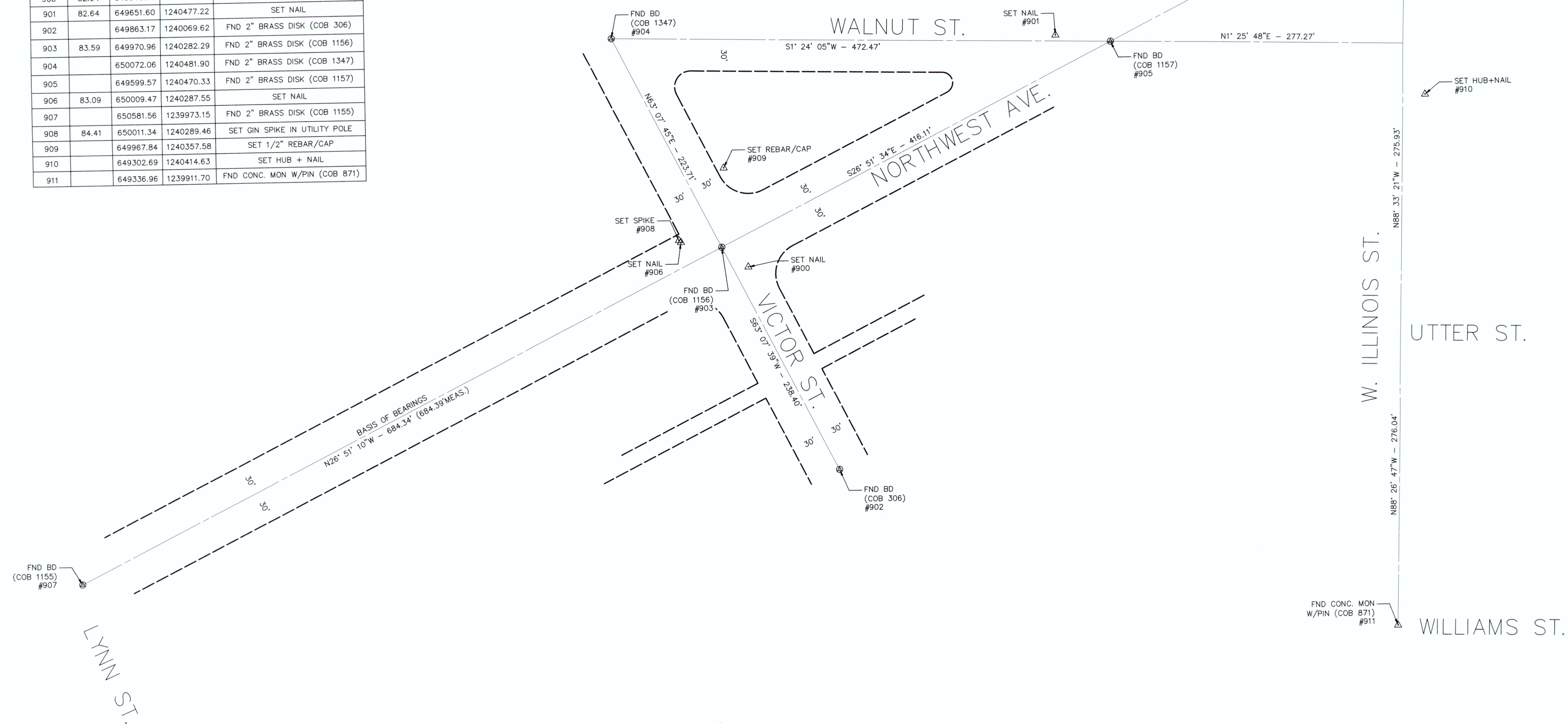
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL NORTHWEST AVE. & VICTOR ST.

SHEET	OF
12	45

# SURVEY CONTROL MAP NORTHWEST AVE. & VICTOR ST. INTERSECTION



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	82.94	649946.14	1240263.02	SET NAIL
901	82.64	649651.60	1240477.22	SET NAIL
902		649863.17	1240069.62	FND 2" BRASS DISK (COB 306)
903	83.59	649970.96	1240282.29	FND 2" BRASS DISK (COB 1156)
904		650072.06	1240481.90	FND 2" BRASS DISK (COB 1347)
905		649599.57	1240470.33	FND 2" BRASS DISK (COB 1157)
906	83.09	650009.47	1240287.55	SET NAIL
907		650581.56	1239973.15	FND 2" BRASS DISK (COB 1155)
908	84.41	650011.34	1240289.46	SET GIN SPIKE IN UTILITY POLE
909		649967.84	1240357.58	SET 1/2" REBAR/CAP
910		649302.69	1240414.63	SET HUB + NAIL
911		649336.96	1239911.70	FND CONC. MON W/PIN (COB 871)



Date	No	Revision	By
	4		
	3		
	2		
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PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

DIRECTOR PUBLIC WORKS E.C.J. \_\_\_\_\_  
 CITY ENGINEER C.M.A.S. \_\_\_\_\_  
 ASSISTANT DIRECTOR M.A.O. \_\_\_\_\_

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

**SCALE**  
 Horiz. 1" = 60'  
 Vert. N/A

**DATUM**  
 NAD 83/98  
 NAVD 88

Job. No. ES563  
 Date 05/02/2023  
 Field Bk. 1068-1

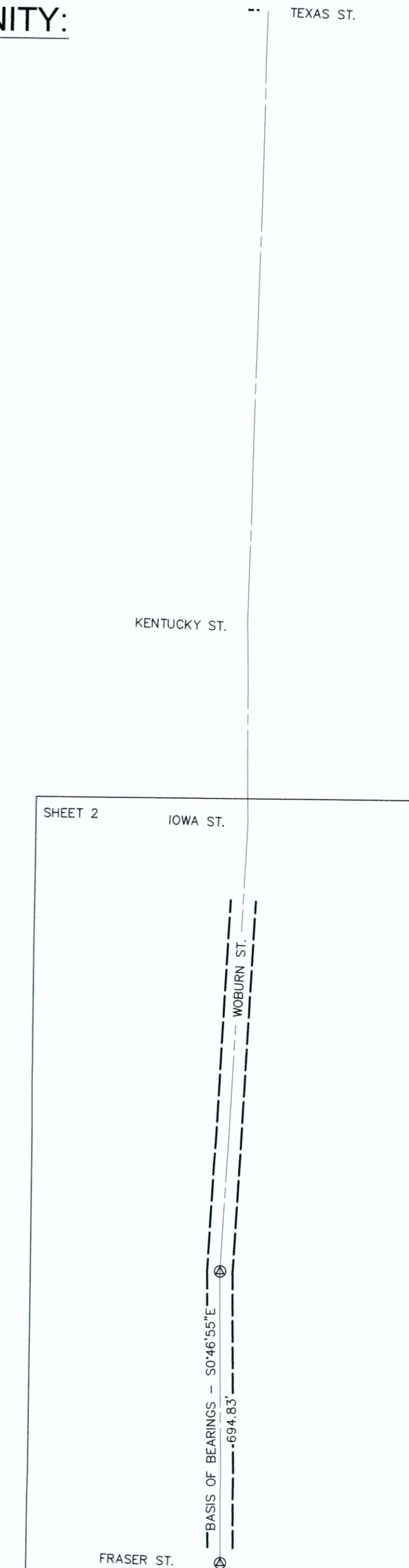
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL NORTHWEST AVE. & VICTOR ST.

SHEET 13 OF 45

# WEST SIDE NON-MOTORIZED IMPROVEMENTS

## CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563 SURVEY CONTROL WORKSHEET

PROJECT VICINITY:



**SURVEYOR'S NOTES:**

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE  
  
**BASIS OF BEARINGS:** CITY OF BELLINGHAM EU-0190 (SEWER MAIN REPLACEMENT PROGRAM) SURVEY CONTROL PLAN  
  
 LINE HELD: **50°46'55"E 694.83'** BETWEEN FOUND BRASS DISKS (COB 1906 & 1387) IN THE CENTERLINE OF WOBURN ST., AS SHOWN.  
  
**BASIS OF COORDINATES:**  
  
 COB 1906 (#902) BRASS DISK N: 643722.45 E: 1251542.62  
 COB 1387 (#905) BRASS DISK N: 643027.70 E: 1251552.10
2. **VERTICAL DATUM:** NAVD88  
  
 METHOD: CLOSED LOOP DIFFERENTIAL LEVELING  
  
 PROJECT BENCHMARKS:  
  
 COB 5891 (#904) BRASS DISK BM EL=136.30' (HELD)  
 COB 1906 (#902) BRASS DISK IN PVC EL=99.77' (R=99.89')  
 COB 5867 LIGHT POLE BOLT EL=170.67'
3. DATE OF SURVEY: **MARCH 21 & 22, 2023**
4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.
5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.
6. THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5±.
8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.
9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

**LEGEND:**

- △ SURVEY CONTROL
- ⊙ FOUND CENTERLINE MON.
- BD BRASS DISK

**SHEET INDEX:**

- SHEET 1: COVER SHEET & NOTES
- SHEET 2: SURVEY CONTROL MAP



4			
3			
2			
1			
Date	No	Revision	By

PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

DIRECTOR PUBLIC WORKS E.C.J. \_\_\_\_\_  
 CITY ENGINEER C.M.A.S. \_\_\_\_\_  
 ASSISTANT DIRECTOR M.A.O. \_\_\_\_\_

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

**SCALE**  
 Horiz. 1"=250'  
 Vert. N/A

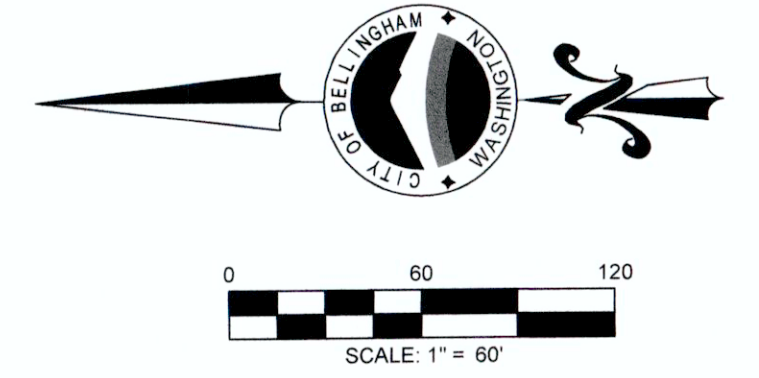
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 NAVD 88

Job. No. ES563  
 Date 05/02/2023  
 Field Bk. 1068-1

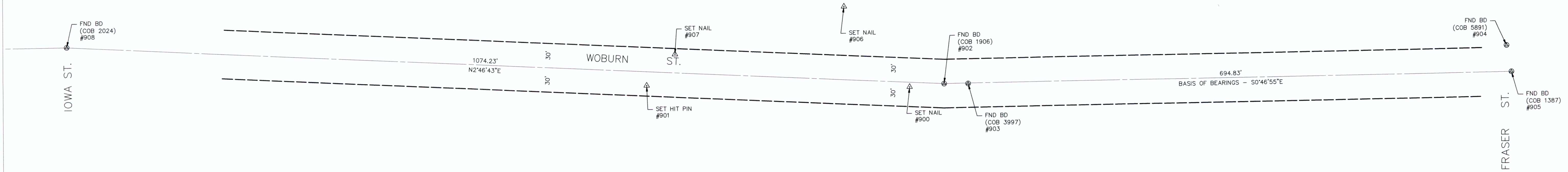
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL NORTHWEST AVE. & VICTOR ST.

SHEET 14 OF 45

**SURVEY CONTROL MAP  
WOBURN ST.**



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	97.51	643764.61	1251538.95	SET NAIL
901	82.88	644086.38	1251543.17	SET HIT PIN
902	99.77 (R=99.89)	643722.45	1251542.62	FND BRASS DISK (COB 1906)
903	101.28	643693.12	1251542.46	FND BRASS DISK (COB 3997)
904	136.30	643033.50	1251584.47	FND BRASS DISK (COB 5891)
905	136.27	643027.70	1251552.10	FND BRASS DISK (COB 1387)
906	-	643844.44	1251638.60	SET NAIL
907	-	644051.58	1251581.61	SET HIT PIN
908	-	644795.42	1251594.70	FND BRASS DISK (COB 2024) L546896



Date	No	Revision	By
	4		
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	1		

PROJECT ENGINEER \_\_\_\_\_  
 DESIGNED/DRAWN \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_

DIRECTOR PUBLIC WORKS E.C.J. \_\_\_\_\_  
 CITY ENGINEER C.M.A.S. \_\_\_\_\_  
 ASSISTANT DIRECTOR M.A.O. \_\_\_\_\_

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

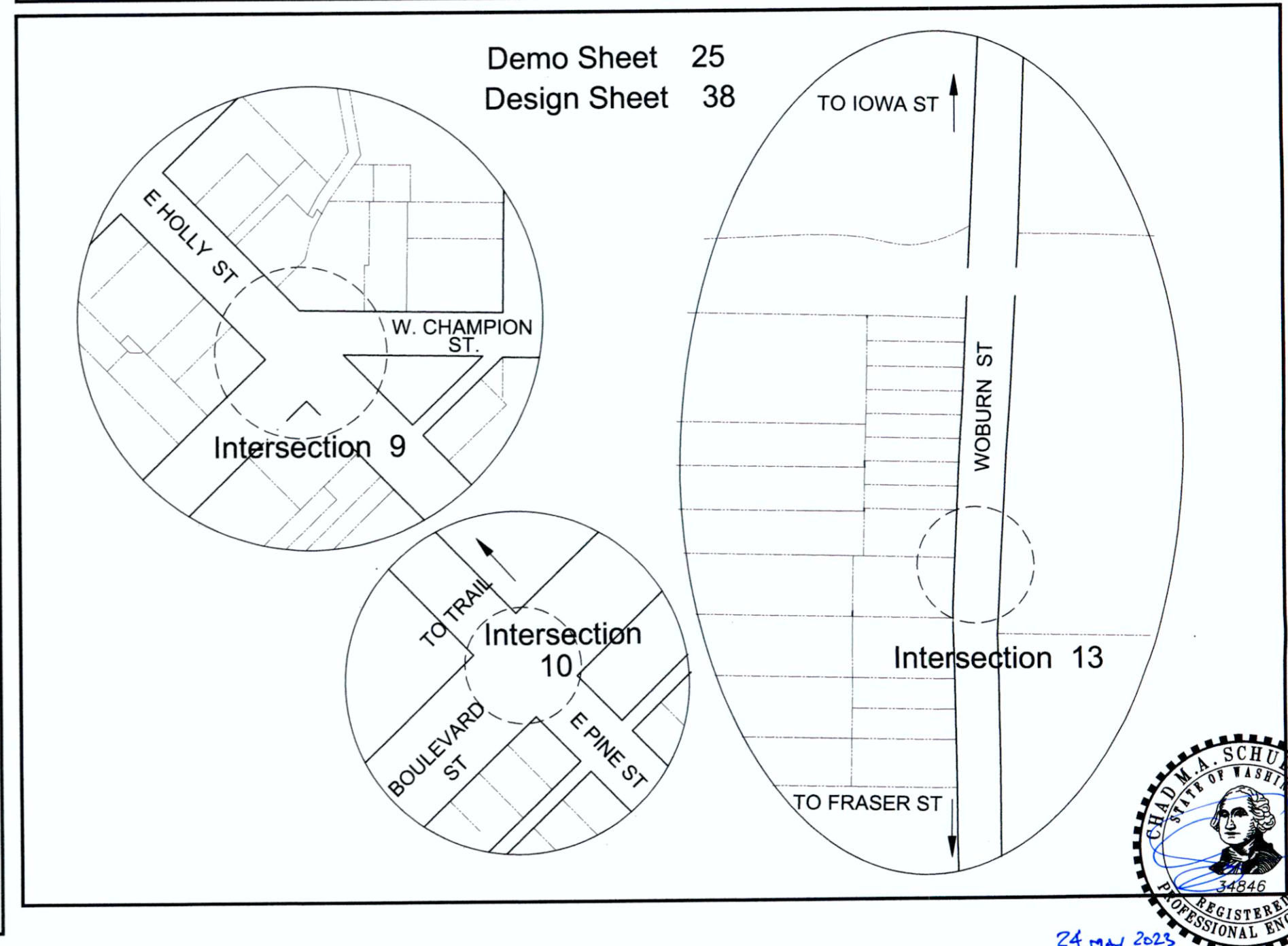
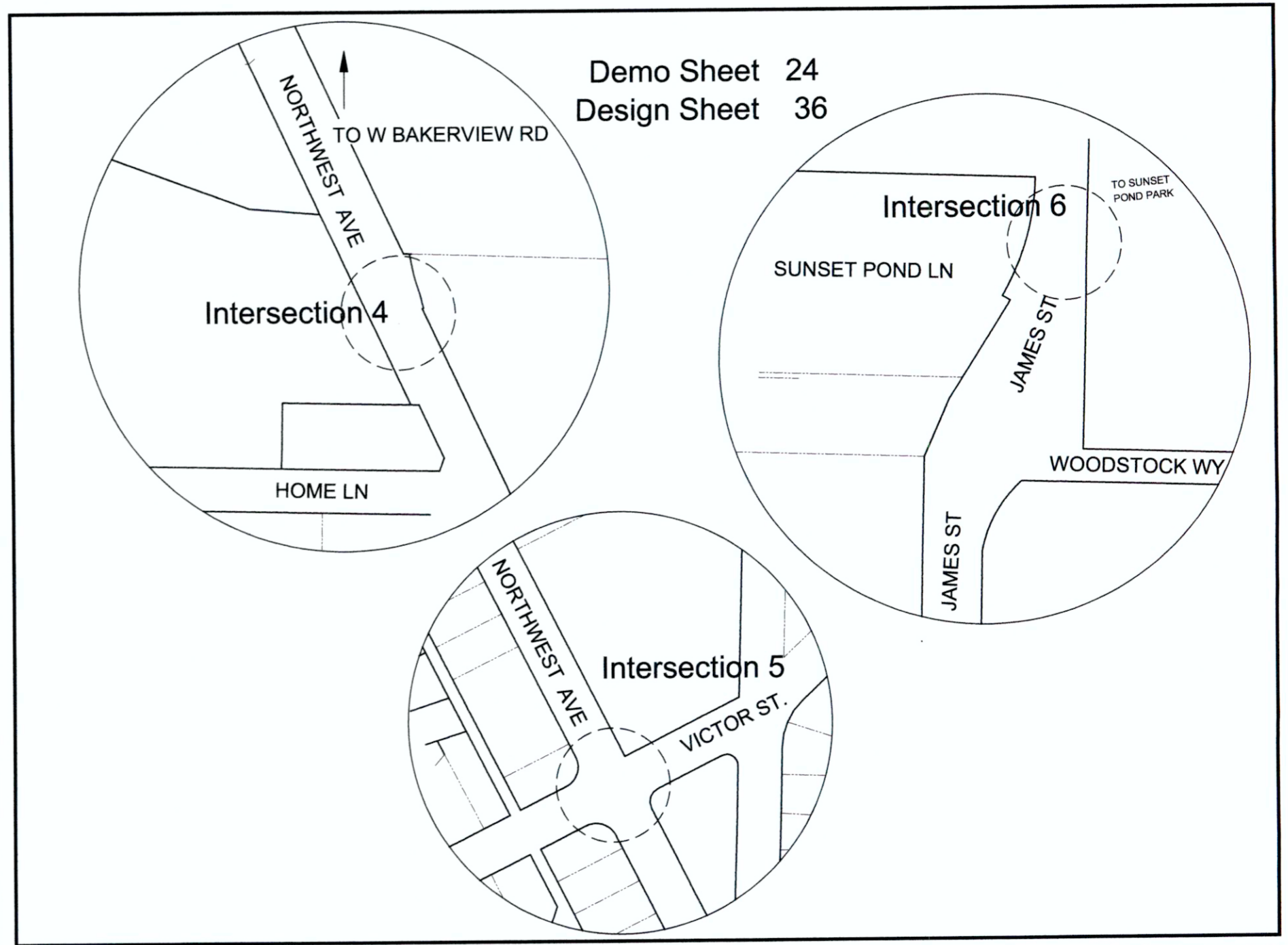
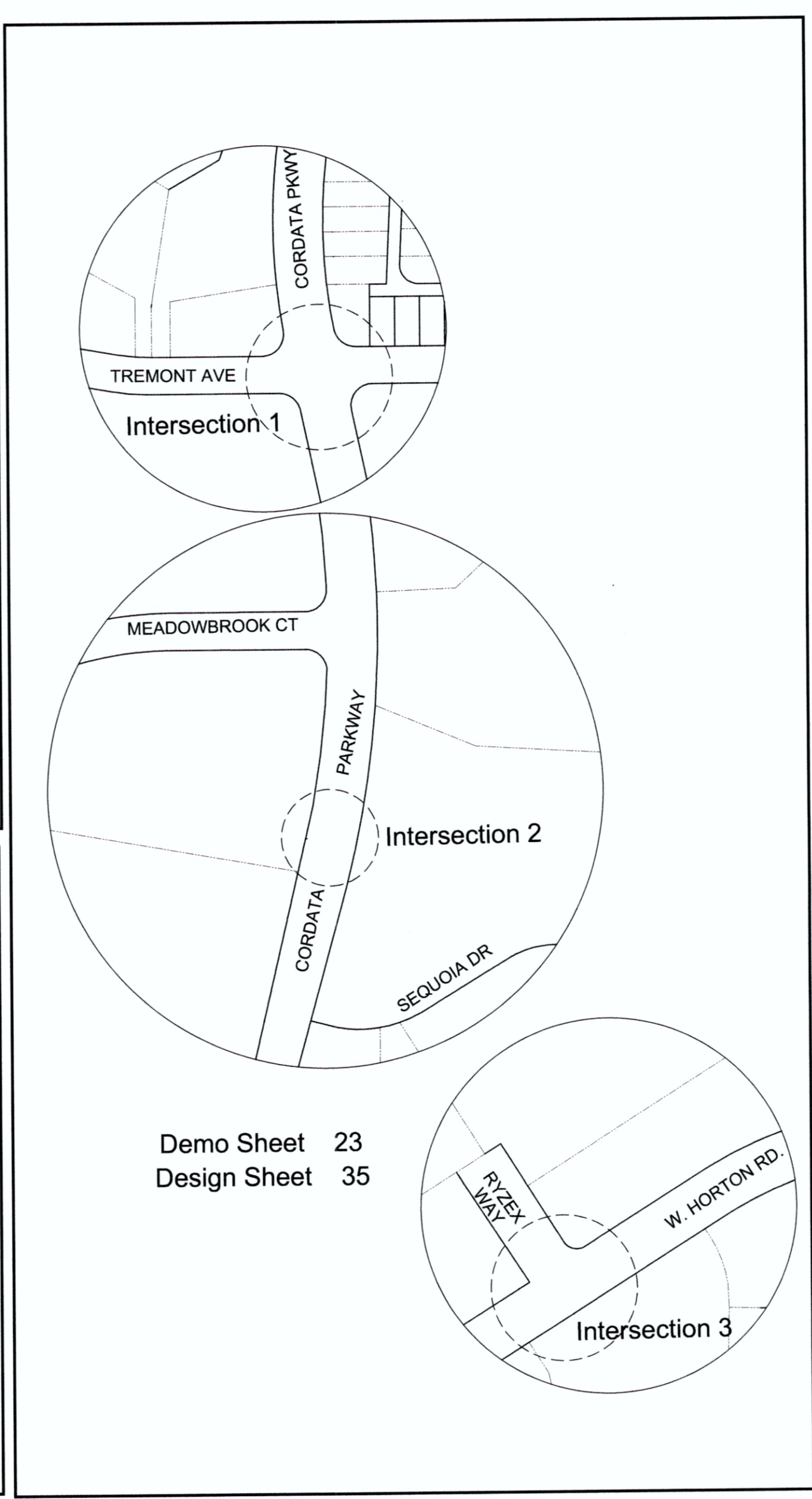
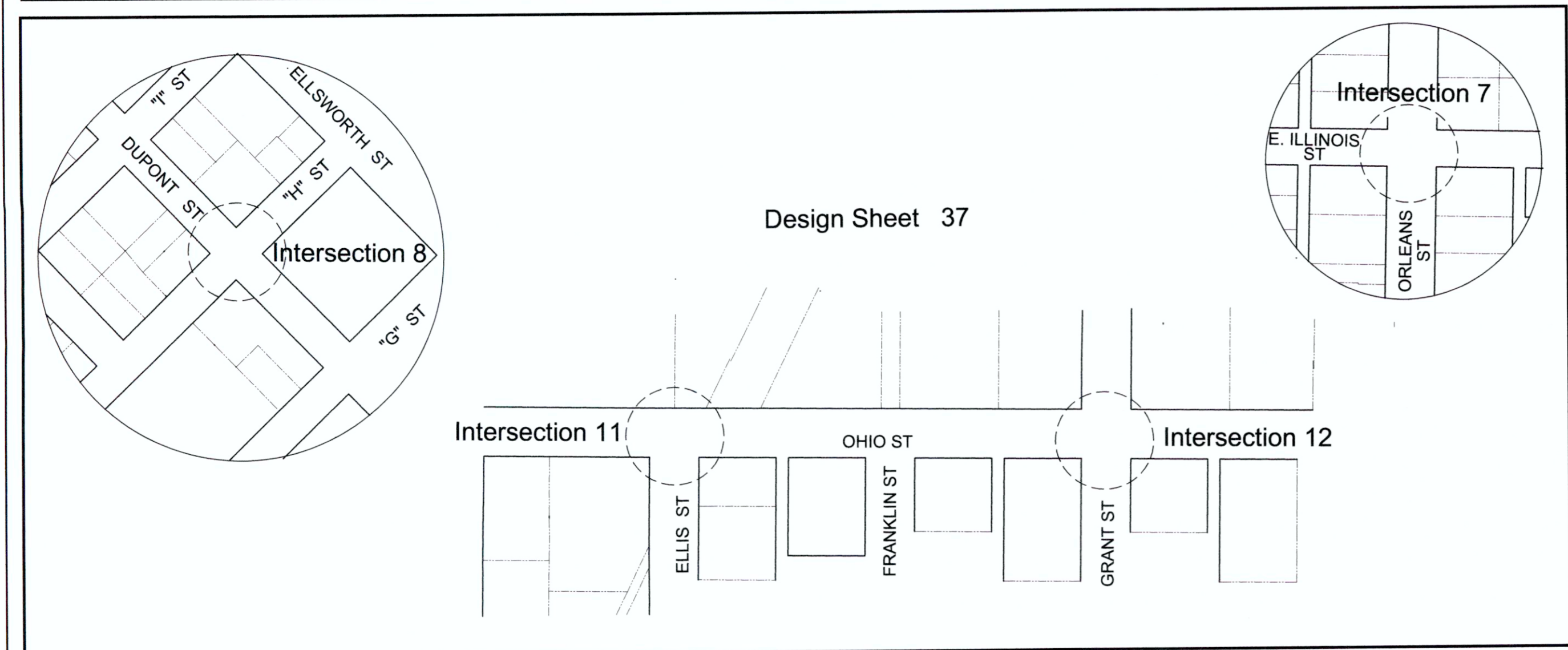
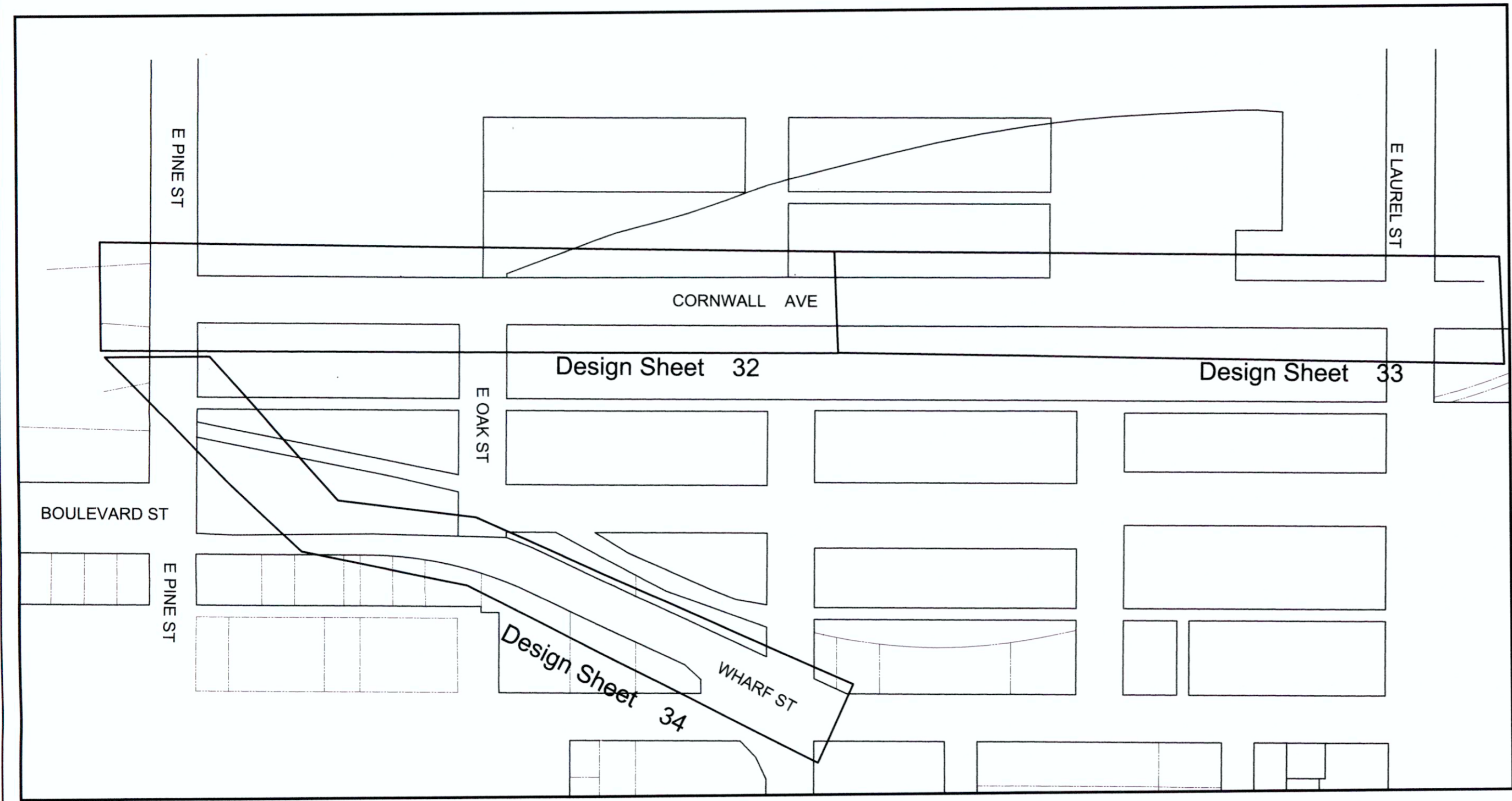
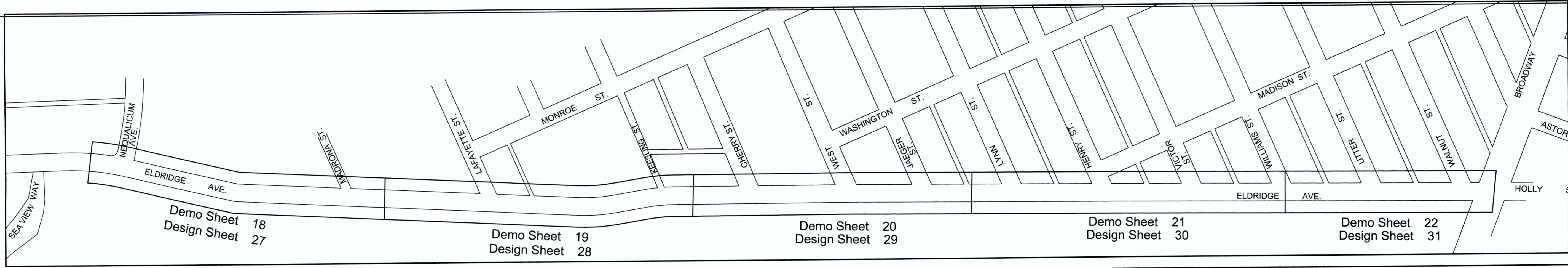
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 Horiz. 1"=60'  
 Vert. N/A

**DATUM**  
 NAD 83/98  
 NAVD 88

Job. No. ES563  
 Date 05/02/2023  
 Field Bk. 1068-1

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 SURVEY CONTROL WOBURN ST

SHEET 15 OF 45



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Date	No	Revision

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 PROJECT SHEET MAP

SHEET 16 OF 45



**CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPPP) PLAN**

THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

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

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

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

AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G., ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).

WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.

SLURRY AND PROCESS WATER RESULTING FROM SAW CUTTING AND ASPHALT COLD-PLANING SHALL BE COLLECTED AND DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY PER DOE BMP C151 AND BMP C152: CONCRETE HANDLING AND SAW CUTTING AND SURFACE POLLUTION PREVENTION RESPECTIVELY.

PROCESS WATER THAT IS GENERATED DURING HYDRO-DEMOLITION, SURFACE ROUGHENING, OR SIMILAR OPERATIONS SHALL NOT DRAIN TO ANY NATURAL OR CONSTRUCTED DRAINAGE CONVEYANCE AND SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUND WATER OR SURFACE WATER QUALITY STANDARDS

EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS. LOCATIONS MAYBE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY INSPECTOR.

**CONSTRUCTION STORMWATER POLLUTION PREVENTION ELEMENTS 1-13**

**ELEMENT 1: PRESERVE VEGETATION/MARK CLEARING LIMITS**

- PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRADING) CLEARLY MARK ALL CLEARING LIMITS AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA AS SHOWN ON THE DRAWINGS.
- SILT FENCE, GEOTEXTILE ENCASED BARRIERS, CONSTRUCTION FENCE, ORANGE PLASTIC FENCE, OR OTHER APPROVED MEASURES MAY BE USED TO MARK THE CLEARING LIMITS IN ADDITION TO THE CONSTRUCTION FENCING SHOWN ON THE PLAN.
- THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C101: PRESERVING NATURAL VEGETATION  
 \* BMP C103: HIGH VISIBILITY PLASTIC OR METAL FENCE

**ELEMENT 2: ESTABLISH CONSTRUCTION ACCESS**

IT IS ANTICIPATED THAT ALL CONSTRUCTION TRAFFIC TO BE ON PAVED SURFACES, HOWEVER IF ANY SEDIMENT IS TRACKED ONTO PUBLIC ROADS, THEY SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY, OR MORE FREQUENTLY DURING WET WEATHER. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C107: CONSTRUCTION ROAD/PARKING AREA STABILIZATION

**ELEMENT 3: CONTROL FLOW RATES**

PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VELOCITY AND PEAK VOLUMETRIC FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C240: SEDIMENT TRAP

**ELEMENT 4: INSTALL SEDIMENT CONTROLS**

- THE DUFF LAYER, NATIVE SOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE.
- SEDIMENT CONTROL BMP'S SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE BMP'S SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
- PRIOR TO LEAVING THE CONSTRUCTION SITE, STORMWATER RUNOFF FROM DISTURBED AREAS SHALL PASS THROUGH AN APPROPRIATE SEDIMENT REMOVAL BMP'S. RUNOFF FROM FULL STABILIZED AREAS MAY BE DISCHARGED WITHOUT A SEDIMENT REMOVAL BMP, BUT MUST MEET PERFORMANCE STANDARDS OF CONTROL FLOW RATES.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C208: TRIANGULAR SILT DIKE  
 \* BMP C231: BRUSH BARRIER  
 \* BMP C232: GRAVEL FILTER BERM  
 \* BMP C233: SILT FENCE  
 \* BMP C234: VEGETATED STRIP  
 \* BMP C235: STRAW WATTLES  
 \* BMP C240: SEDIMENT TRAP  
 \* BMP C251: CONSTRUCTION STORMWATER FILTRATION (SCREEN, BAG, OR FIBER FILTERS)

\* BMP C251: CONSTRUCTION STORMWATER FILTRATION (SCREEN, BAG, OR FIBER FILTERS)

**ELEMENT 5: STABILIZE SOILS**

- EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY APPLICATION OF EFFECTIVE BMP'S THAT PROTECT THE SOIL FROM EROSION FORCES OF RAINDROPS, FLOWING WATER, AND WIND.
- TO PREVENT EROSION, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN THE TIME PERIODS SET FORTH BELOW:  
 \* DURING THE WET SEASON (OCTOBER 1-APRIL 30): 2 DAYS  
 \* DURING THE DRY SEASON (MAY 1-SEPT. 30): 7 DAYS  
 THIS STABILIZATION REQUIREMENT APPLIES TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. THESE TIMES MAY BE ADJUSTED BY THE LOCAL PERMITTING AUTHORITY IF IT CAN BE SHOWN THAT SITE CONDITIONS OR THE AVERAGE TIME BETWEEN STORM EVENTS JUSTIFIES A DIFFERENT STANDARD.
- SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
- SOIL STOCKPILES SHALL BE STABILIZED FROM EROSION, PROTECTED WITH SEDIMENT TRAPPING MEASURES, AND WHERE POSSIBLE, BE LOCATED AWAY FROM STORM DRAIN INLETS, WATERWAYS, AND DRAINAGE CHANNELS.
- APPLICABLE BMP'S INCLUDE, BUT ARE NOT LIMITED TO: TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, THE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED AND DUST CONTROL. SELECT SOIL STABILIZATION MEASURES SHALL BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, ESTIMATED DURATION OF USE, AND THE POTENTIAL WATER QUALITY IMPACTS.
- REMOVE ALL TESC MEASURES AS SOON AS PRACTICAL AFTER ESTABLISHMENT OF UNIFORM GRASS GROWTH OR INSTALLATION OF OTHER PERMANENT STABILIZATION MEASURES. REPAIR ANY DAMAGE TO STABILIZED SURFACES AFTER REMOVAL OF TESC MEASURES.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C120: TEMPORARY AND PERMANENT SEEDING  
 \* BMP C121: MULCHING  
 \* BMP C124: SODDING  
 \* BMP C140: DUST CONTROL

**ELEMENT 6: PROTECT SLOPES**

- DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, REDUCING CONTINUOUS LENGTH OF SLOPE WITH TERRACING AND DIVERSIONS REDUCING SLOPE STEEPNESS, AND ROUGHENING SLOPE SURFACES (E.G., TRACK WALKING).
- OFF-SITE STORMWATER RUNOFF OR GROUNDWATER SHALL BE DIVERTED AWAY FROM SLOPES AND DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES, AND OR SWALES. OFF-SITE STORMWATER SHOULD BE MANAGED SEPARATELY FROM STORMWATER GENERATED ON THE SITE.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C126: NETS AND BLANKETS  
 \* BMP C123: PLASTIC COVERING  
 \* BMP C130: SURFACE ROUGHENING

**ELEMENT 7: PROTECT DRAIN INLETS**

ALL STORM DRAIN INLETS OPERABLE DURING CONSTRUCTION AND ALL INLETS WITHIN 200' DOWNSTREAM OF THE PROJECT SITE SHALL BE PROTECTED WITH CATCH BASIN FILTERS SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT. CATCH BASIN FILTERS IN THE ROADWAY WILL BE OIL/SEDIMENT FILTERS AND CATCH BASIN FILTERS OUTSIDE OF THE ROADWAY WILL BE SEDIMENT FILTERS.

SUGGESTED BMP'S/BMP'S TO BE USED  
 \* BMP C260: STORM DRAIN INLET PROTECTION

**ELEMENT 8: STABILIZE CHANNELS AND OUTLETS:**

- ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PREVENT EROSION FROM THE EXPECTED PEAK 10 MINUTE VELOCITY OF FLOW FROM A TYPE-IA, 10-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR, 1-HOUR FLOW RATE INDICATED BY AN APPROVED CONTINUOUS RUNOFF MODEL, CREATED BY A FACTOR OF 1.6, MAY BE USED.
- STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAM BANKS, SLOPES AND DOWNSTREAM REACHES SHALL BE PROVIDED AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.

SUGGESTED BMP'S/BMP'S TO BE USED  
 \* BMP C209: OUTLET PROTECTION

**ELEMENT 9: CONTROL POLLUTANTS**

- ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
- COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH OR THE ENVIRONMENT. ON-SITE FUELING TANKS SHALL INCLUDE SECONDARY CONTAINMENT.
- MAINTENANCE, FUELING, AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES SHALL BE CONDUCTED USING SPILL PREVENTION AND CONTROL MEASURES. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY SPILL INCIDENT.
- BMP'S SHALL BE USED TO PREVENT OR TREAT CONTAMINATION OF STORMWATER RUNOFF BY PH MODIFYING SOURCES. THESE SOURCES INCLUDE, BUT ARE NOT LIMITED TO: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHING AND CURING WATERS, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, AND CONCRETE PUMPING AND MIXER WASHOUT WATERS. PERMITTEES SHALL ADJUST THE PH OF STORMWATER IF NECESSARY TO PREVENT VIOLATIONS OF WATER QUALITY STANDARDS.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C151: CONCRETE HANDLING

\* BMP C151: CONCRETE HANDLING  
 \* BMP C152: SAWCUTTING AND SURFACING POLLUTION PREVENTION  
 \* BMP C153: MATERIAL DELIVERY, STORAGE AND CONTAINMENT

**ELEMENT 10: CONTROL DEWATERING**

- FOUNDATION, VAULT, AND TRENCH DE-WATERING WATER, WHICH HAVE SIMILAR CHARACTERISTICS TO STORMWATER RUNOFF AT THE SITE, SHALL BE DISCHARGED INTO A CONTROLLED CONVEYANCE SYSTEM PRIOR TO DISCHARGE TO A SEDIMENT TRAP OF SEDIMENT POND.
- CLEAN, NON-TURBID DE-WATERING WATER, SUCH AS WELL-POINT GROUND WATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO, OR DIRECTLY INTO SURFACE WATERS OF THE STATE, AS SPECIFIED IN ELEMENT #8, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. CLEAN DE-WATERING WATER SHOULD NOT BE ROUTED THROUGH STORMWATER SEDIMENT PONDS.
- OTHER DE-WATERING DISPOSAL OPTIONS MAY INCLUDE:  
 \* INFILTRATION.  
 \* TRANSPORT OFF SITE IN A VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS.  
 \* ECOLOGY APPROVED ON-SITE CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES.  
 \* SANITARY SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, IF THERE IS NO OTHER OPTION.  
 \* USE OF A SEDIMENTATION BAG (DIRTBAG OR APPROVED EQUAL) WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DE-WATERING.
- HIGHLY TURBID, CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C205: SUBSURFACE DRAINS

**ELEMENT 11: MAINTAIN BMP'S**

WHEN SEDIMENT ACCUMULATION IN SEDIMENTATION STRUCTURES, OTHER THAN INLET PROTECTION DEVICES, HAS REACHED A POINT ONE-THIRD DEPTH OF SEDIMENT STRUCTURE OR DEVICE, OR IF FLOW THROUGH THE DEVICE IS REDUCED BY MORE THAN ONE-THIRD CAPACITY, THE CONTRACTOR SHALL REMOVE AND REPLACE DISPOSABLE DEVICES OR CLEAN AND DISPOSE OF SEDIMENT.

TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOILS SHALL BE PERMANENTLY STABILIZED.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C150: MATERIALS ON HAND

**ELEMENT 12: MANAGE THE PROJECT**

SEASONAL WORK LIMITATIONS FROM OCTOBER 1 THROUGH APRIL 30, CLEARING, GRADING, AND OTHER SOIL DISTURBING ACTIVITIES SHALL ONLY BE PERMITTED IF SHOWN TO THE SATISFACTION OF THE LOCAL PERMITTING AUTHORITY THAT THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE TO RECEIVING WATERS WILL BE PREVENTED THROUGH A COMBINATION OF THE FOLLOWING:  
 A) SITE CONDITIONS INCLUDING EXISTING VEGETATIVE COVERAGE, SLOPE, SOIL TYPE AND PROXIMITY TO RECEIVING WATERS; AND  
 B) LIMITATIONS ON ACTIVITIES AND THE EXTENT OF DISTURBED AREAS; AND  
 C) PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

THE CONTRACTOR WILL DESIGNATE A CONTRACTOR EROSION AND SPILL CONTROL LEAD (CESCL) WHO WILL BE RESPONSIBLE FOR INSPECTING, MAINTAINING AND ARRANGING FOR REPAIRS TO BE MADE TO BMP'S TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

BASED ON THE INFORMATION PROVIDED AND LOCAL WEATHER CONDITIONS, THE LOCAL PERMITTING AUTHORITY MAY EXPAND OR RESTRICT THE SEASONAL LIMITATION ON SITE DISTURBANCE. THE LOCAL PERMITTING AUTHORITY SHALL TAKE ENFORCEMENT ACTION—SUCH AS NOTICE OF VIOLATION, ADMINISTRATIVE ORDER, PENALTY OR STOP-WORK ORDER—UNDER THE FOLLOWING CIRCUMSTANCES:

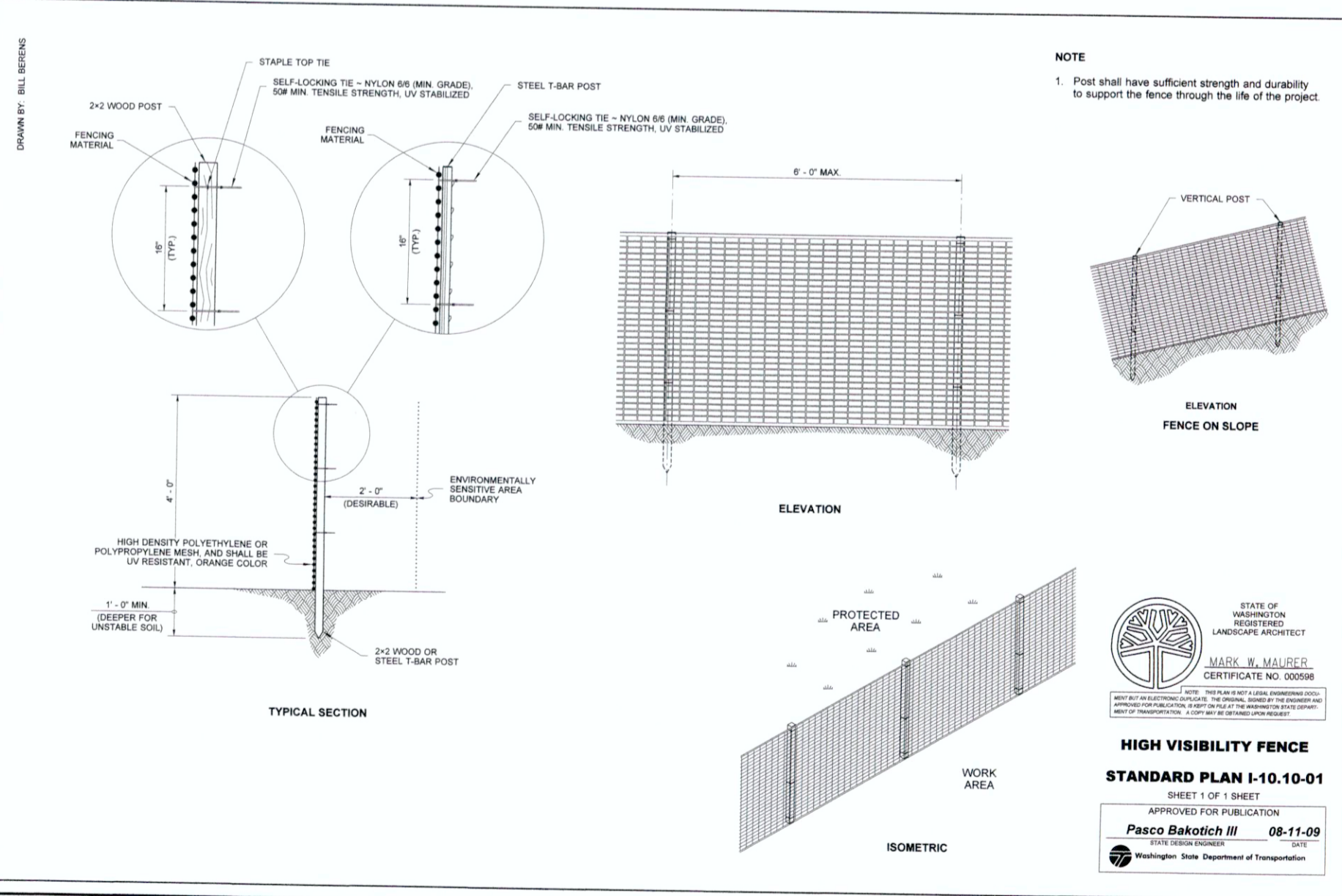
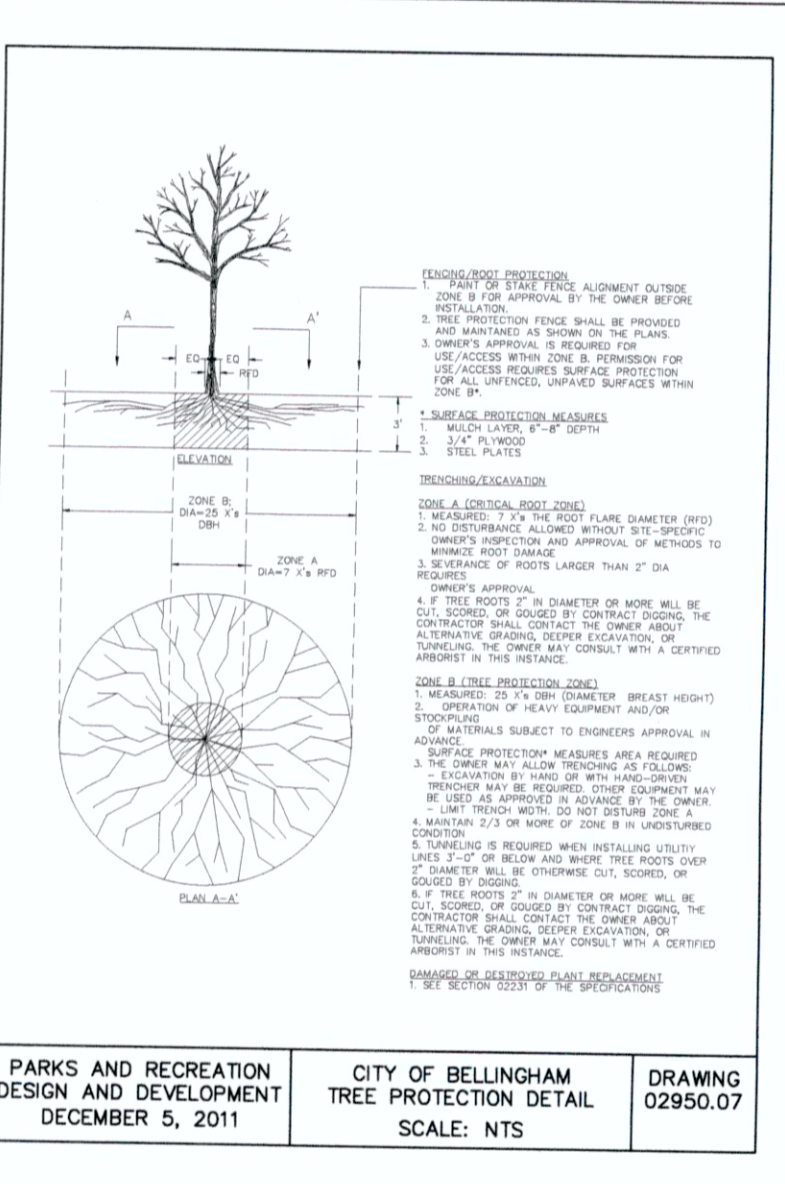
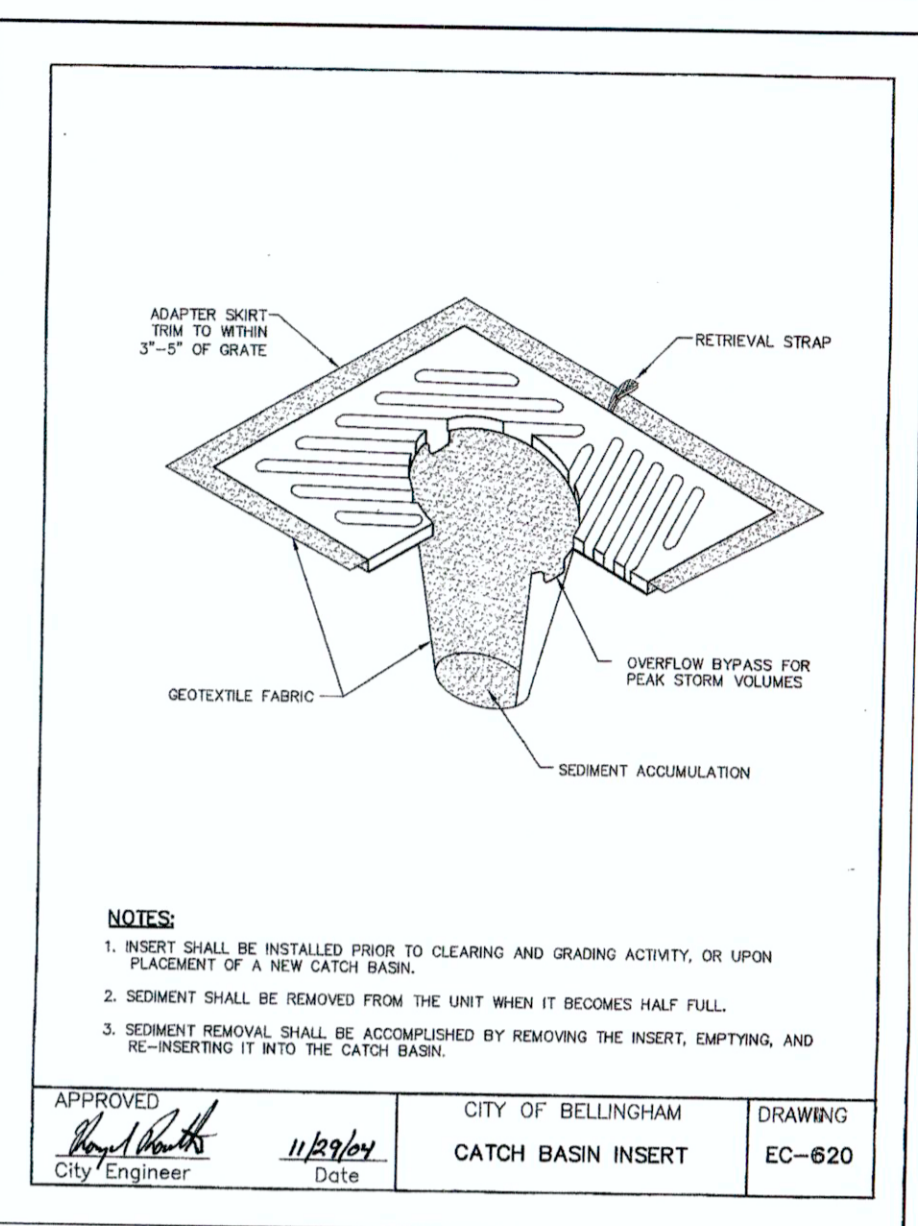
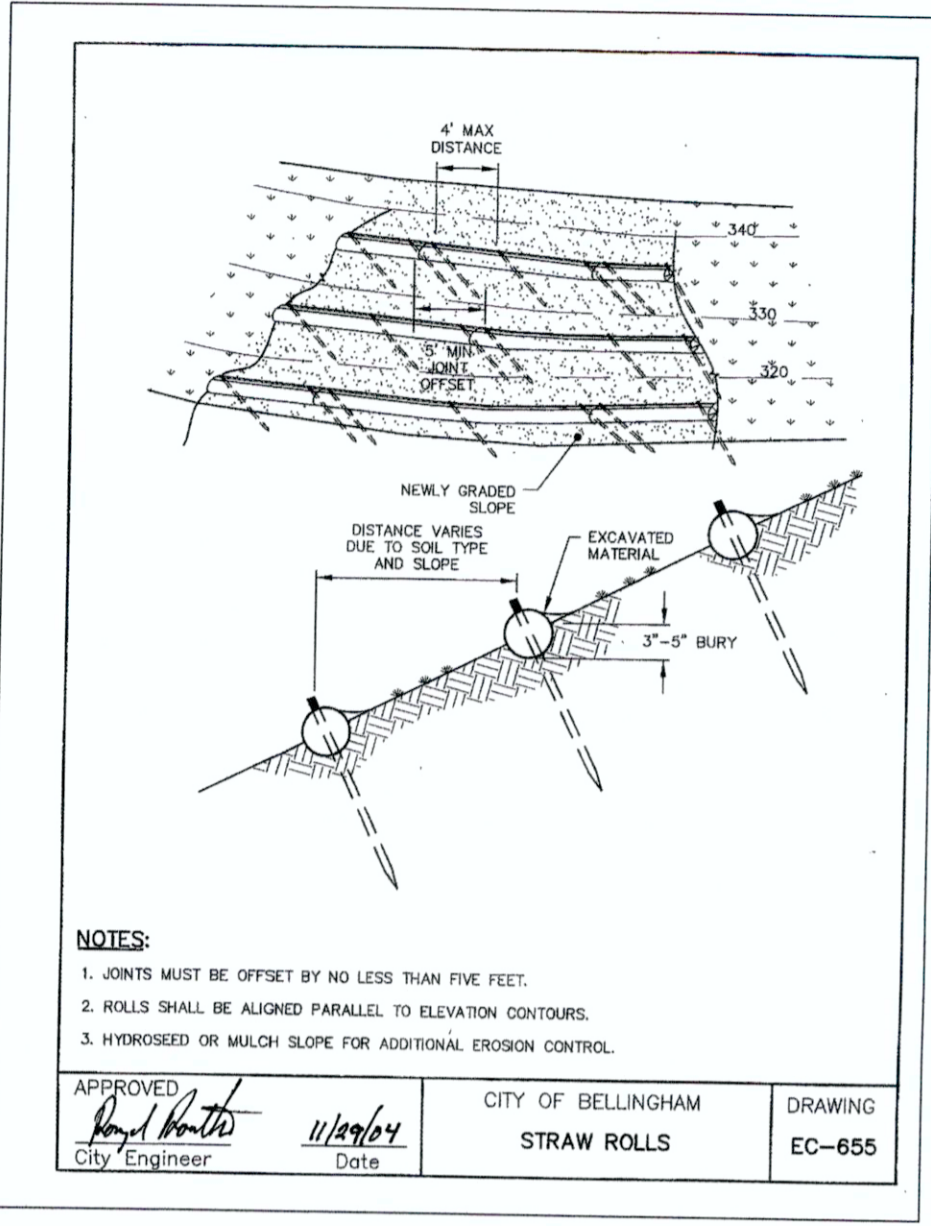
\* IF, DURING THE COURSE OF ANY CONSTRUCTION ACTIVITY OR SOIL DISTURBANCE DURING THE SEASONAL LIMITATION PERIOD, SEDIMENT LEAVES THE CONSTRUCTION SITE CAUSING A VIOLATION OF THE SURFACE WATER QUALITY STANDARD OR

\* IF CLEARING AND GRADING LIMITS OR EROSION AND SEDIMENT CONTROLS MEASURES SHOWN IN THE APPROVED PLAN ARE NOT MAINTAINED.

SUGGESTED BMP'S/BMP'S TO BE USED:  
 \* BMP C160: CERTIFIED EROSION AND SEDIMENT CONTROL LEAD  
 \* BMP C162: SCHEDULING

**ELEMENT 13: PROTECT LOW IMPACT DEVELOPMENT BMP'S**

- CONTRACTOR SHALL PROTECT ALL BIORETENTIONS AND RAIN GARDEN FACILITIES FROM SEDIMENTATION THROUGH INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMP'S ON PORTIONS OF THE SITE THAT DRAIN INTO THE BIORETENTION AND/OR RAIN GARDEN FACILITIES. RESTORE THE FACILITIES TO THEIR FULLY FUNCTIONING CONDITION IF THEY ACCUMULATE SEDIMENT DURING CONSTRUCTION. RESTORING THE FACILITY MUST INCLUDE REMOVAL OF SEDIMENTS AND ANY SEDIMENT-LADEN BIORETENTION GARDEN SOILS, AND REPLACING THE REMOVED SOILS WITH SOILS MEETING THE DESIGN SPECIFICATION.
- CONTRACTOR SHALL MAINTAIN THE INFILTRATION CAPABILITIES OF BIORETENTION AND RAIN GARDEN FACILITIES BY PROTECTING AGAINST COMPACTION BY CONSTRUCTION EQUIPMENT AND FOOT TRAFFIC. PROTECT COMPLETED LAWN AND LANDSCAPED AREAS FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT.
- CONTRACTOR SHALL CONTROL EROSION AND AVOID INTRODUCING SEDIMENT FROM SURROUNDING LAND USES ONTO PERMEABLE PAVEMENTS. DO NOT ALLOW MUDDY CONSTRUCTION EQUIPMENT ON THE BASE MATERIAL OR PAVEMENT. DO NOT ALLOW SEDIMENT-LADEN RUNOFF ONTO PERMEABLE PAVEMENTS.
- CONTRACTOR SHALL CLEAN PERMEABLE PAVEMENTS FOULED WITH SEDIMENTS OR NO LONGER PASSING AN INITIAL INFILTRATION TEST USING LOCAL STORMWATER MANUAL METHODOLOGY OR THE MANUFACTURERS PROCEDURES.
- CONTRACTOR SHALL KEEP ALL HEAVY EQUIPMENT OFF EXISTING SOILS UNDER LID FACILITIES THAT HAVE BEEN EXCAVATED TO FINAL GRADE TO RETAIN THE INFILTRATION RATE OF THE SOILS.



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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
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**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 STORMWATER POLLUTION PREVENTION PLAN NOTES

SHEET 17 OF 45

ELDRIDGE

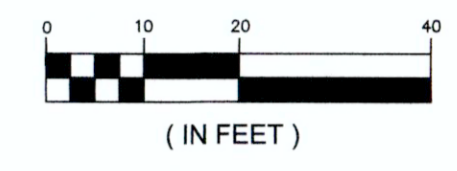
COORDINATE WITH LANDOWNER TO REMOVE PAVEMENT REMNANT.

REMOVE TURN ARROW, STOP BAR AND TYPE 1 RPM ISLAND SALVAGE STOP, STREET, AND YIELD SIGNS.

INSTALL CB INSERT PER COB STANDARD EC-620

UNPLATTED

GRAPHIC SCALE



ELDRIDGE AVE

NEQUALICUM AVE

SQUALICUM WAY

MATCH LINE STATION 7+00

DEMOLITION LEGEND

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ▨ ASPHALT REMOVAL
- ▩ CONCRETE REMOVAL
- ▤ REMOVE SOD AND NATIVE SOIL

EROSION CONTROL LEGEND

- ☒ CATCH BASIN INSERT

INSTALL CB INSERT PER COB STANDARD EC-620

FND BRASS DISC (COB 5848)

FND ROCK IN CONC.

SQUALICUM WAY

MATCH LINE STATION 7+00

MADRONA ST

MATCH LINE STATION 12+50

ELDRIDGE AVE

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3			
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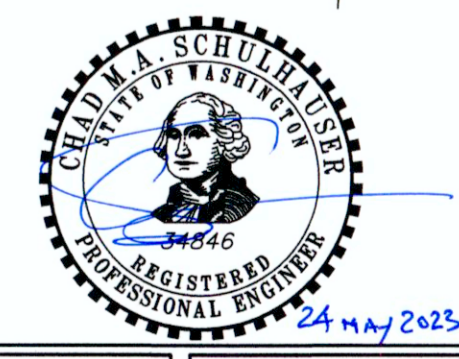
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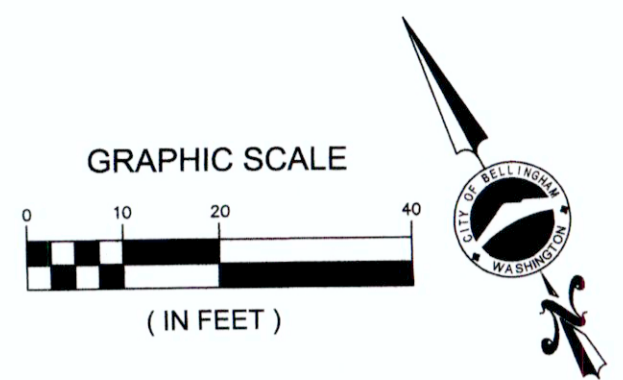
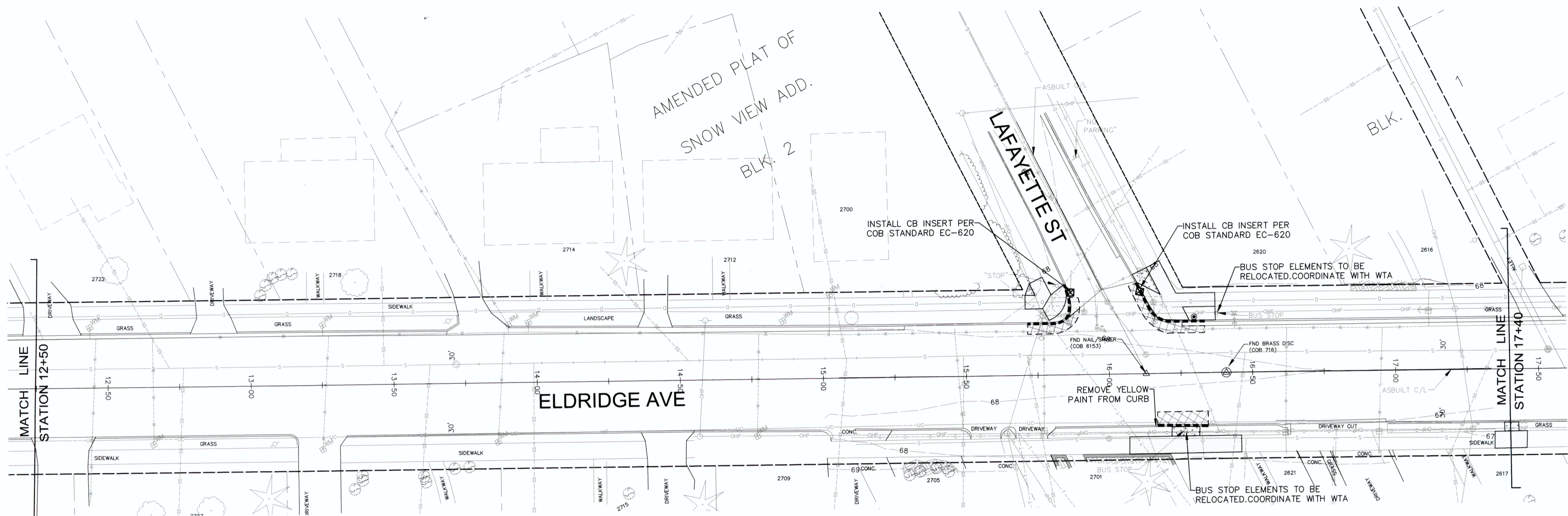
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WEST SIDE NON-MOTORIZED IMPROVEMENTS  
 DEMO & TESC PLAN ELDRIDGE AVE. STA: 2+50 to 12+50

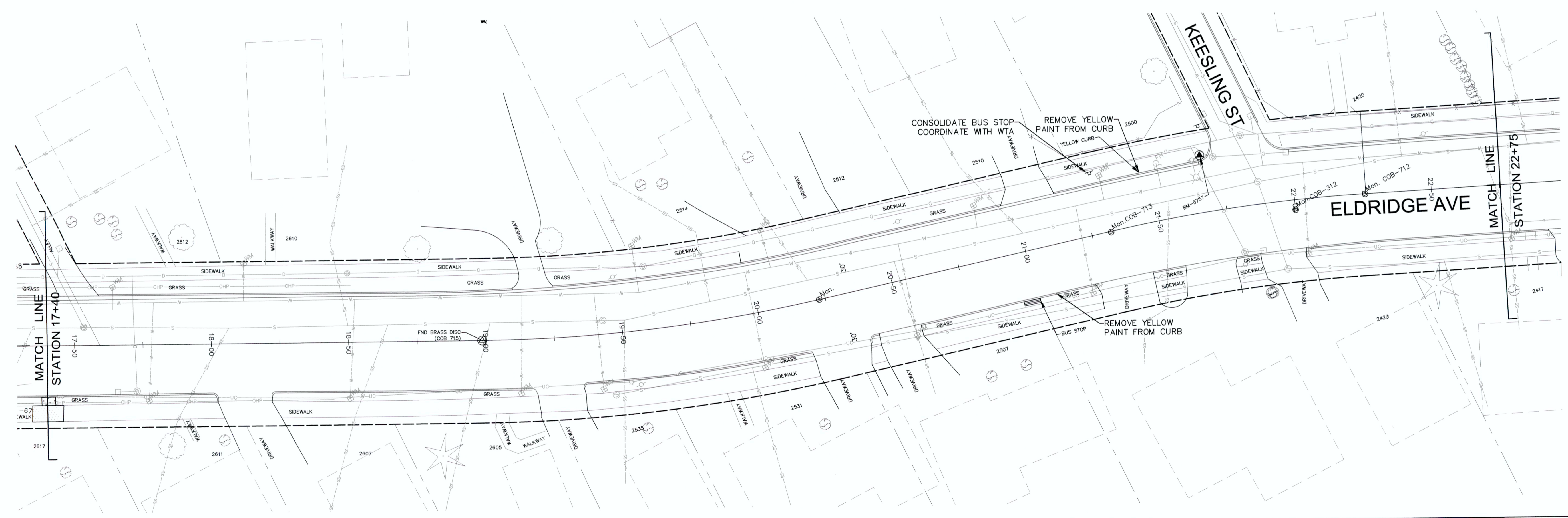
SHEET 18 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923





- DEMOLITION LEGEND**
- SAWCUT LINE
  - REMOVE CURB AND GUTTER
  - ▨ ASPHALT REMOVAL
  - ▭ CONCRETE REMOVAL
  - ▤ REMOVE SOD AND NATIVE SOIL
- EROSION CONTROL LEGEND**
- ☒ CATCH BASIN INSERT



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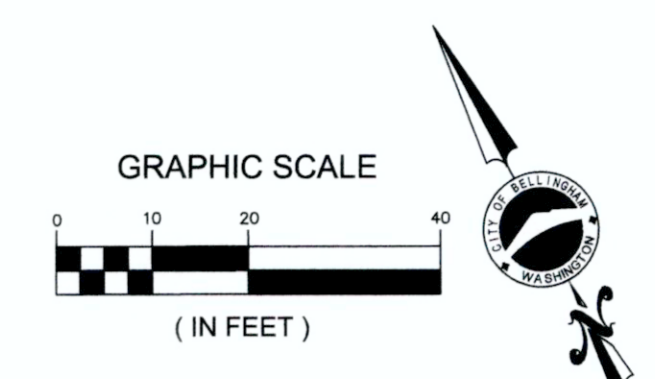
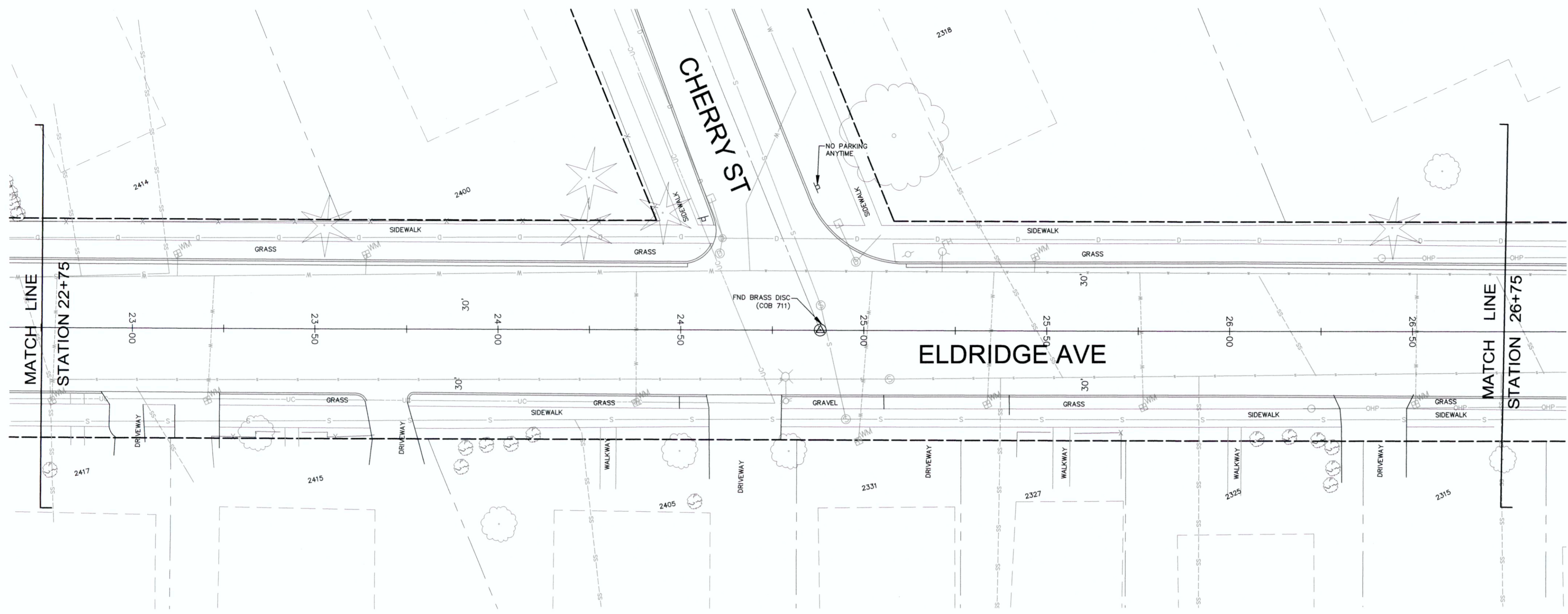
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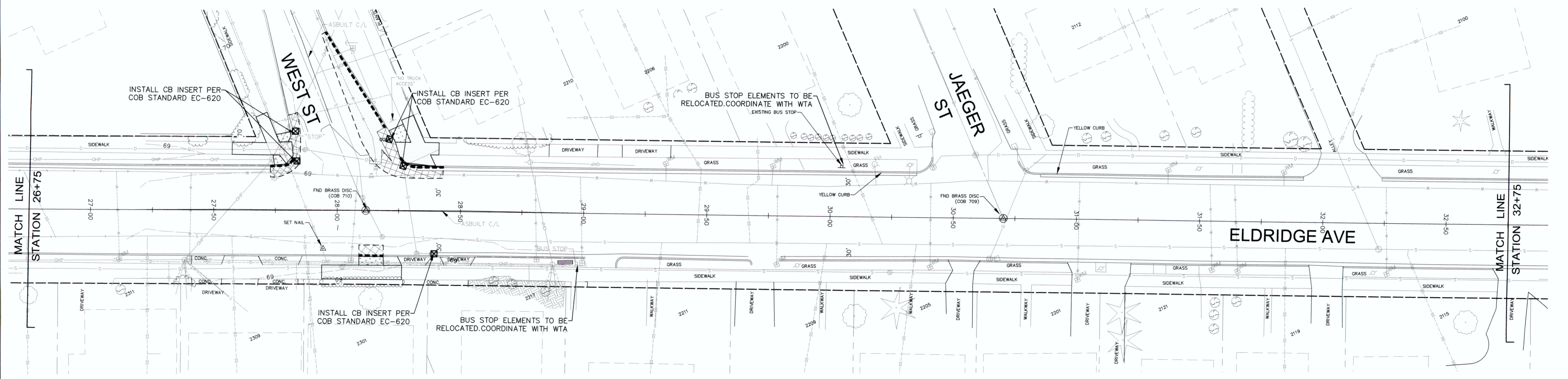
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 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 DEMO & TESC PLAN ELDRIDGE AVE. STA: 12+50 TO 22+75

SHEET 19 OF 45



- DEMOLITION LEGEND**
- SAWCUT LINE
  - REMOVE CURB AND GUTTER
  - ▨ ASPHALT REMOVAL
  - ▤ CONCRETE REMOVAL
  - ▧ REMOVE SOD AND NATIVE SOIL
- EROSION CONTROL LEGEND**
- ☒ CATCH BASIN INSERT



Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

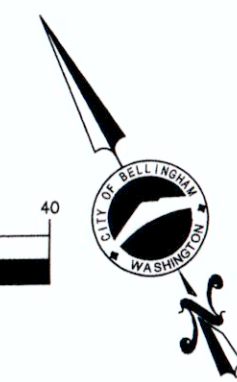
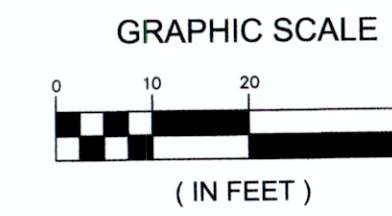
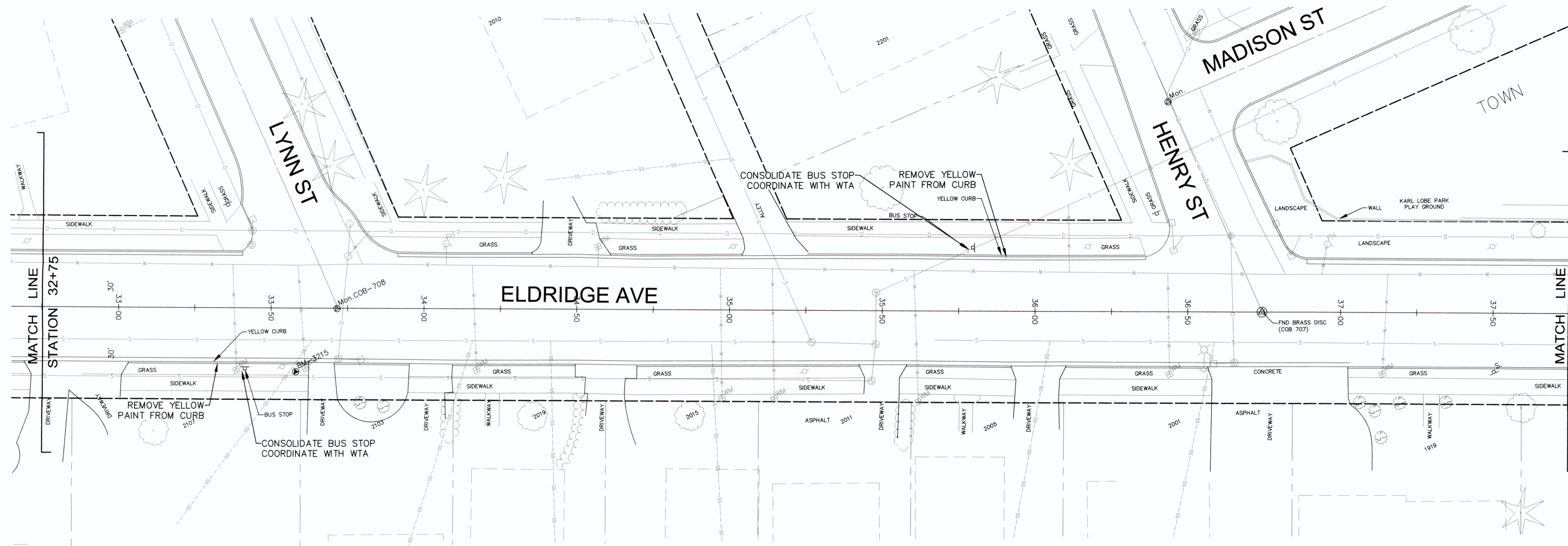
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 Vert. 1"=NA

**DATUM**  
 NAD 83/98  
 NAVD 88

Job No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 DEMO & TESC PLAN ELDRIDGE AVE. STA: 22+75 TO 32+75

SHEET 20 OF 45

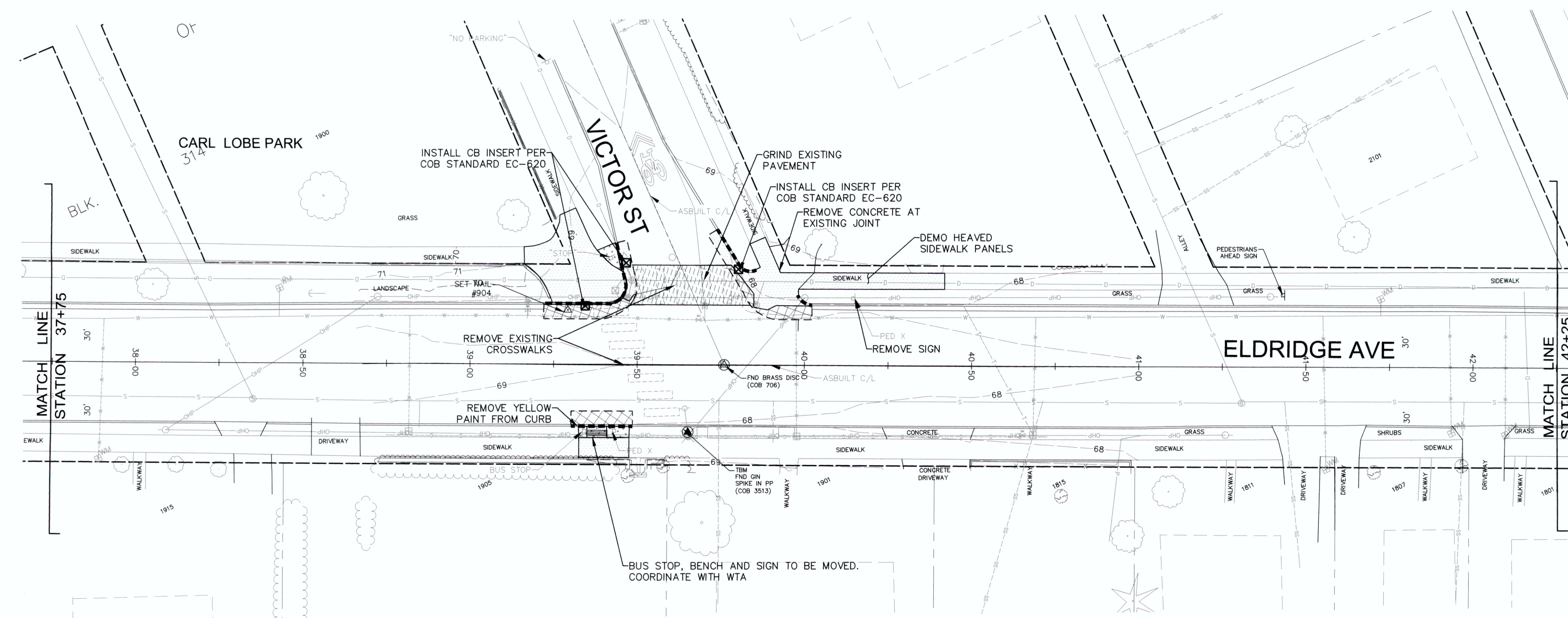


**DEMOLITION LEGEND**

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ▨ ASPHALT REMOVAL
- ▩ CONCRETE REMOVAL
- ▤ REMOVE SOD AND NATIVE SOIL

**EROSION CONTROL LEGEND**

- ☒ CATCH BASIN INSERT



Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

**SCALE**  
 Horiz. 1"=20'  
 Vert. 1"=NA

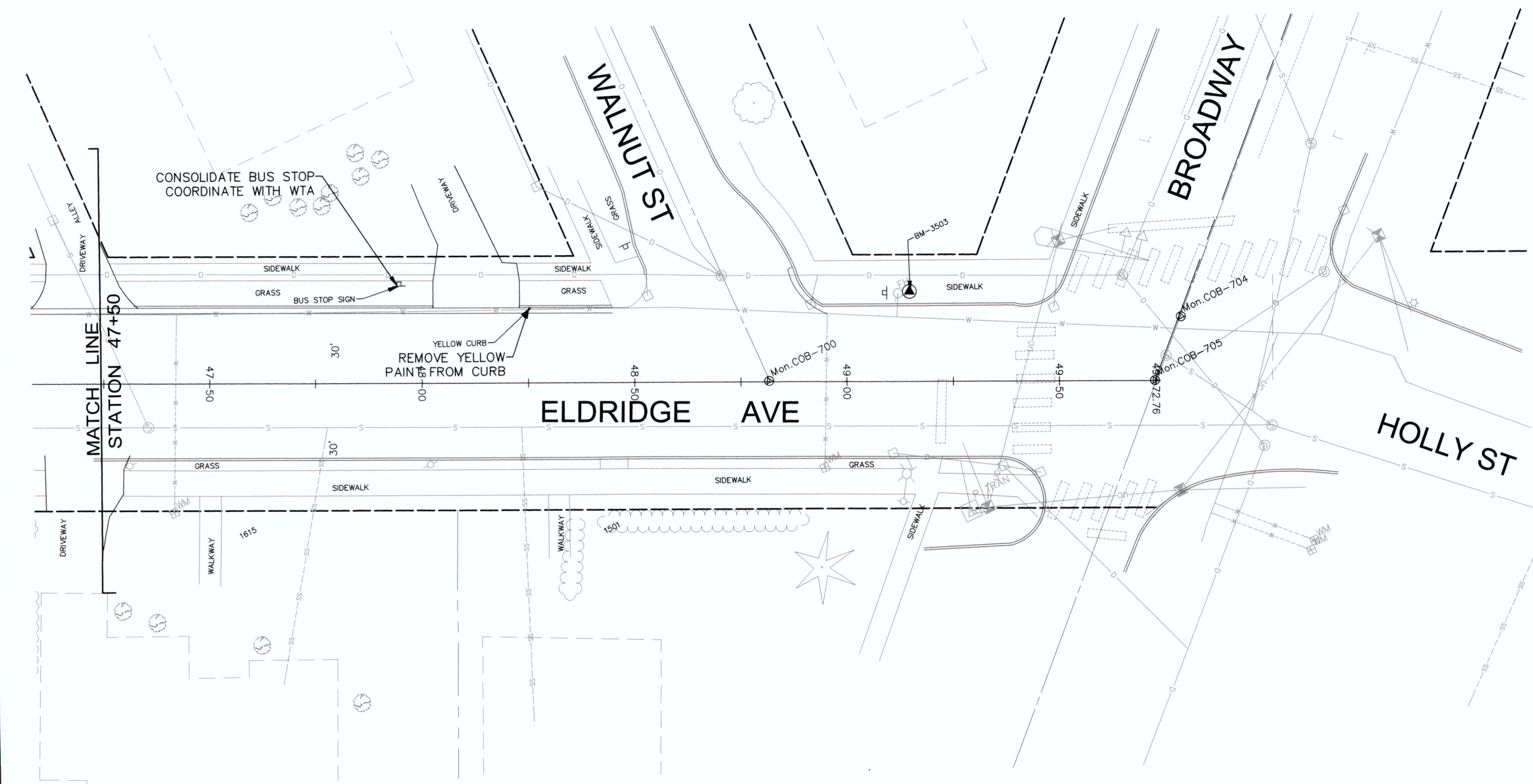
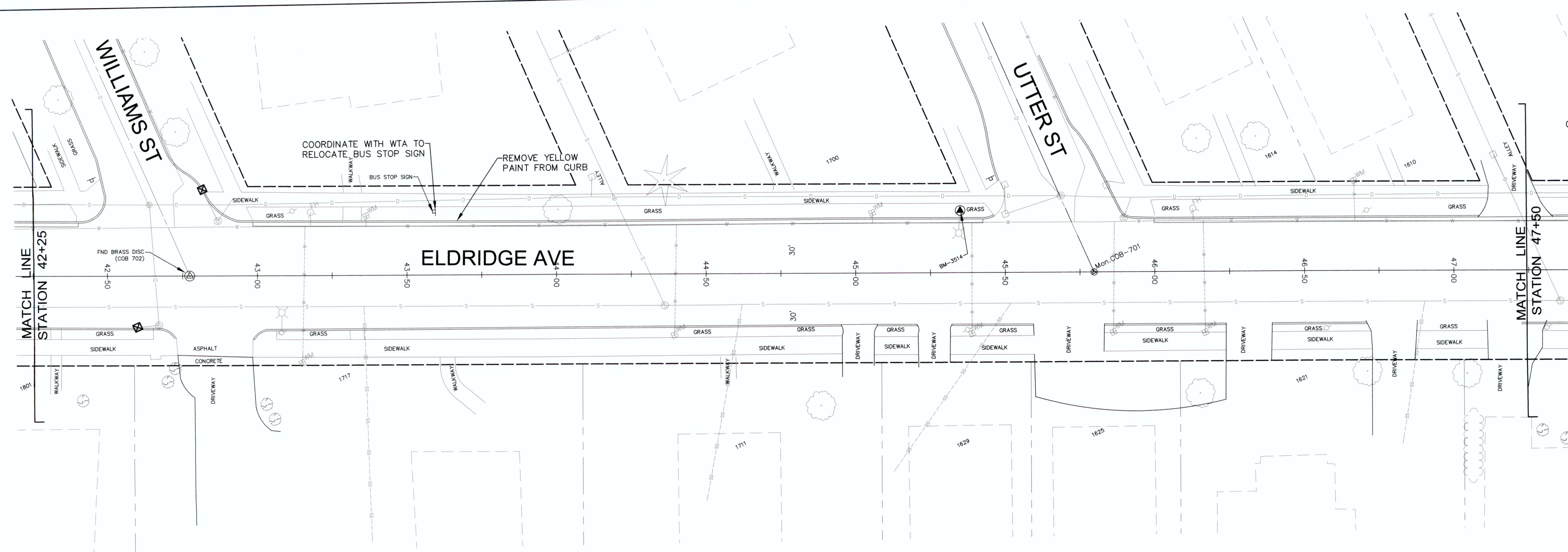
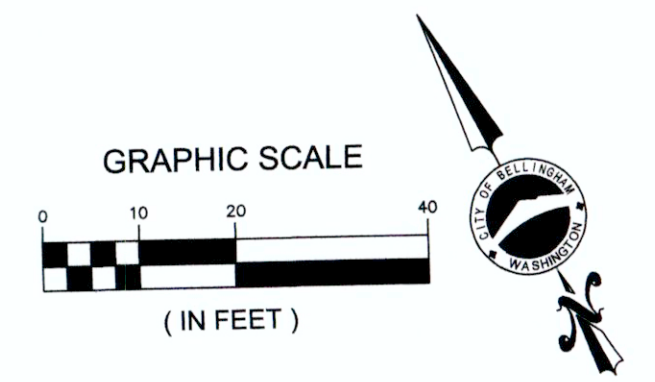
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 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 DEMO & TESC PLAN ELDRIDGE AVE. STA: 32+75 TO 42+25

SHEET 21 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923



- DEMOLITION LEGEND**
- SAWCUT LINE
  - REMOVE CURB AND GUTTER
  - ▨ ASPHALT REMOVAL
  - ▤ CONCRETE REMOVAL
  - ▧ REMOVE SOD AND NATIVE SOIL
- EROSION CONTROL LEGEND**
- ☒ CATCH BASIN INSERT



Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
**ENGINEERING DIVISION**

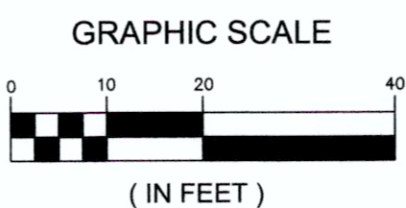
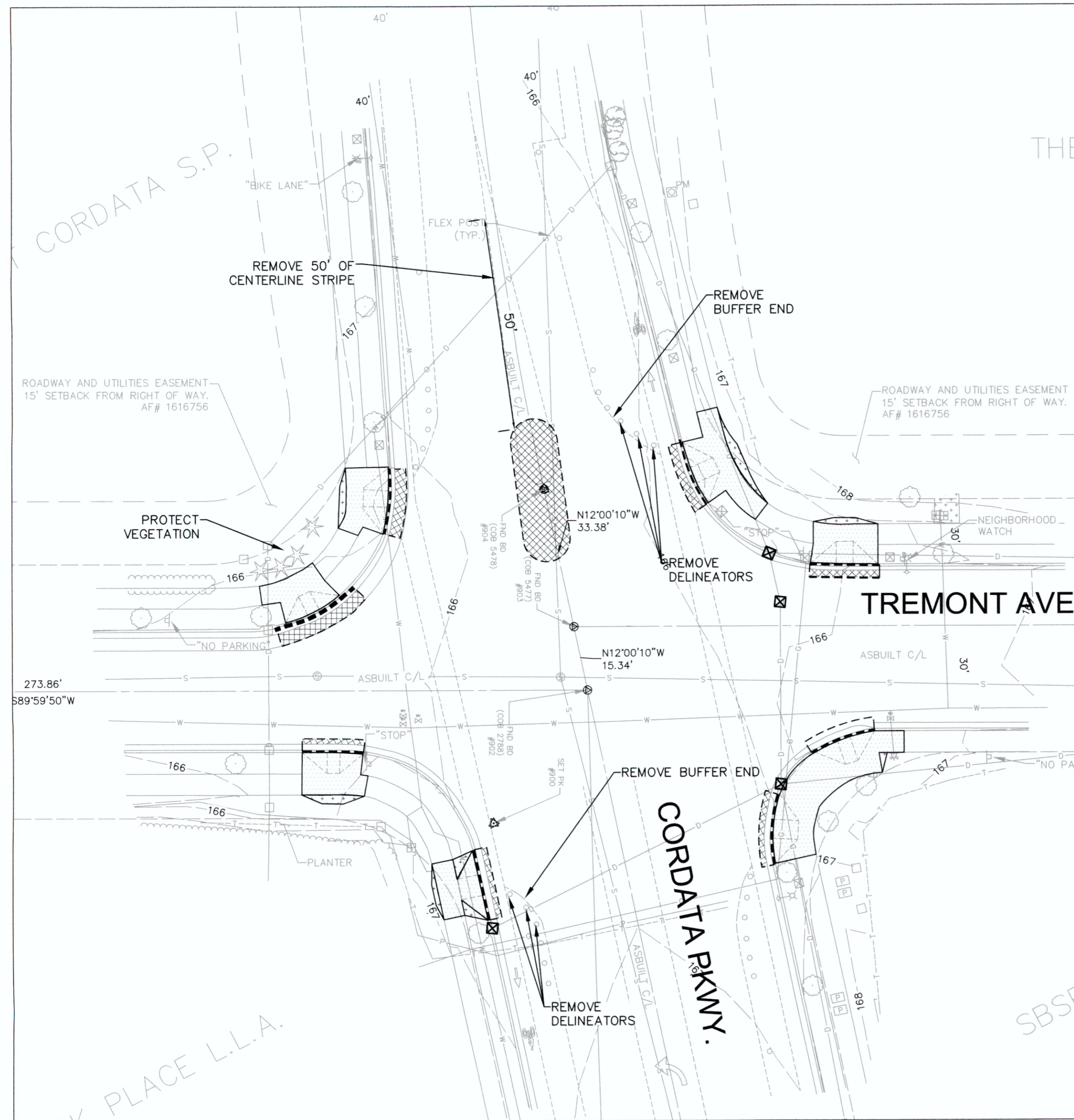
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 Vert. 1"=NA

**DATUM**  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
**DEMO & TESC PLAN ELDRIDGE AVE. STA: 42+25 TO 50+00**

**SHEET**  
 22 **OF**  
 45

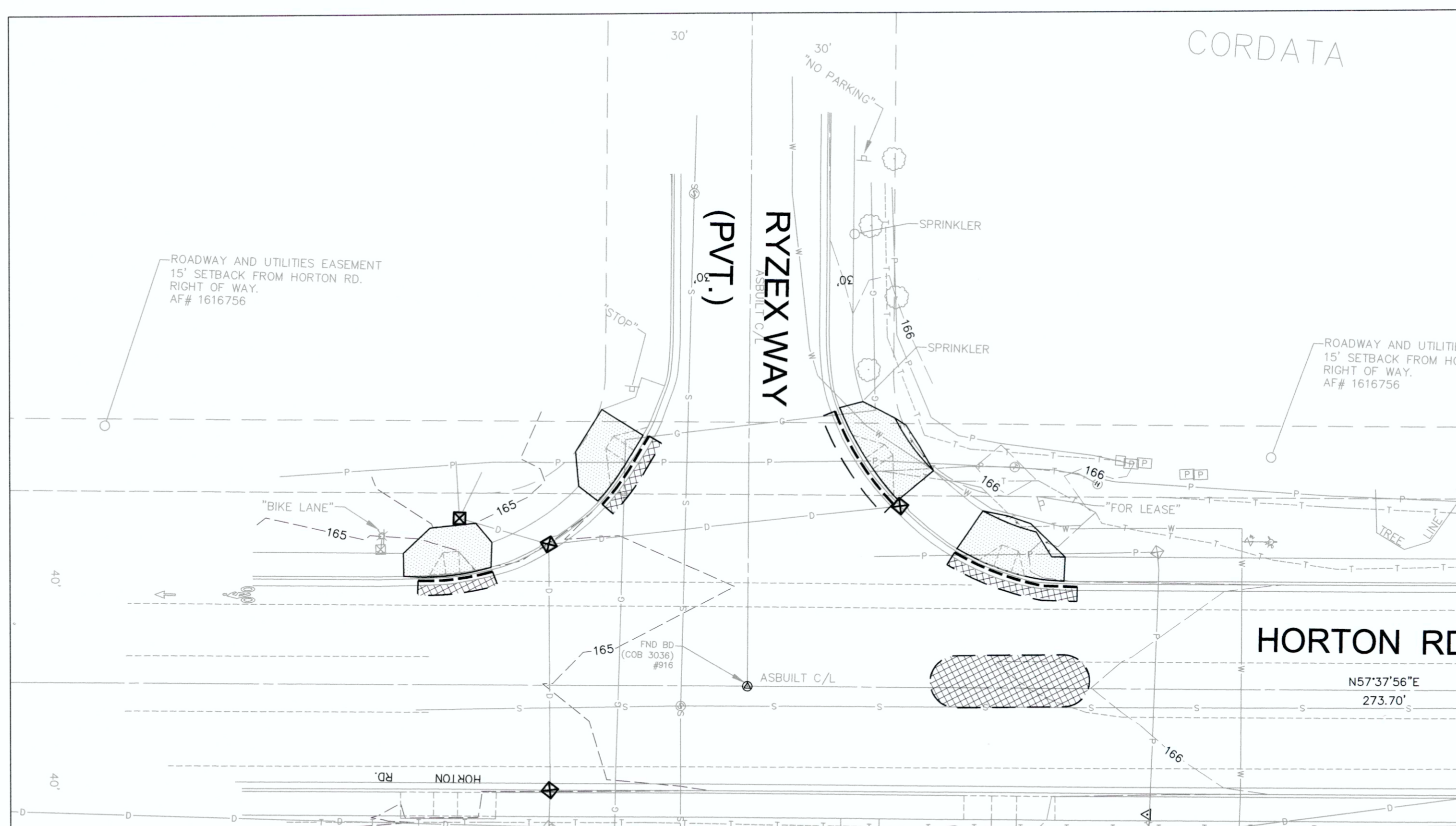
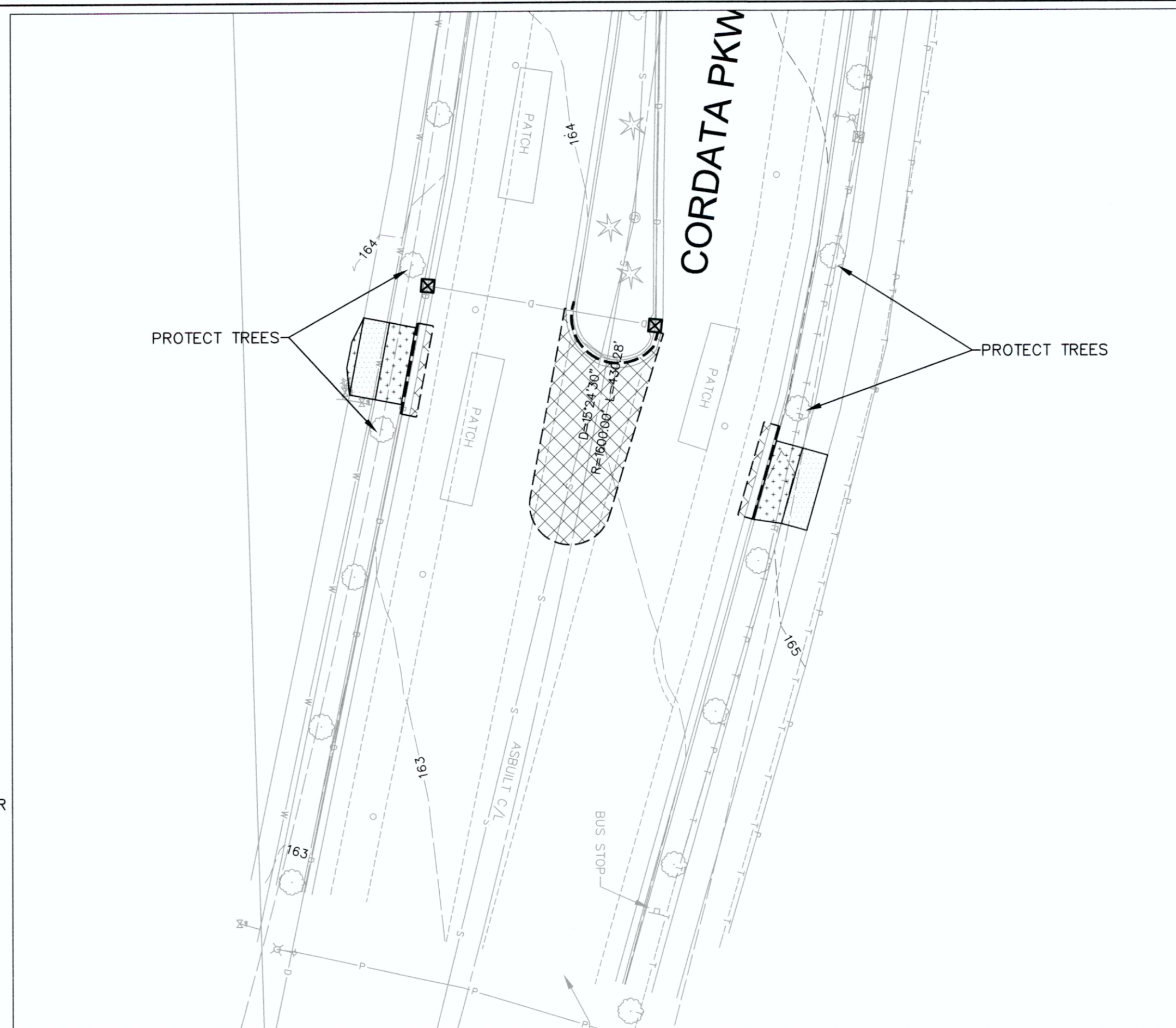


**DEMOLITION LEGEND**

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ▨ ASPHALT REMOVAL
- ▩ CONCRETE REMOVAL
- ▤ CLEARING AND GRUBBING

**EROSION CONTROL LEGEND**

- ☒ CATCH BASIN INSERT



Date	No	Revision	By
	4		
	3		
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	1		

PROJECT ENGINEER	JJB
DESIGNED/DRAWN	ELH
INSPECTOR	DJK

DIRECTOR OF PUBLIC WORKS	E.C.J.
CITY ENGINEER	C.A.M.S.
OPERATIONS ENGINEER	M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

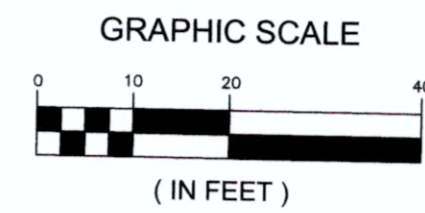
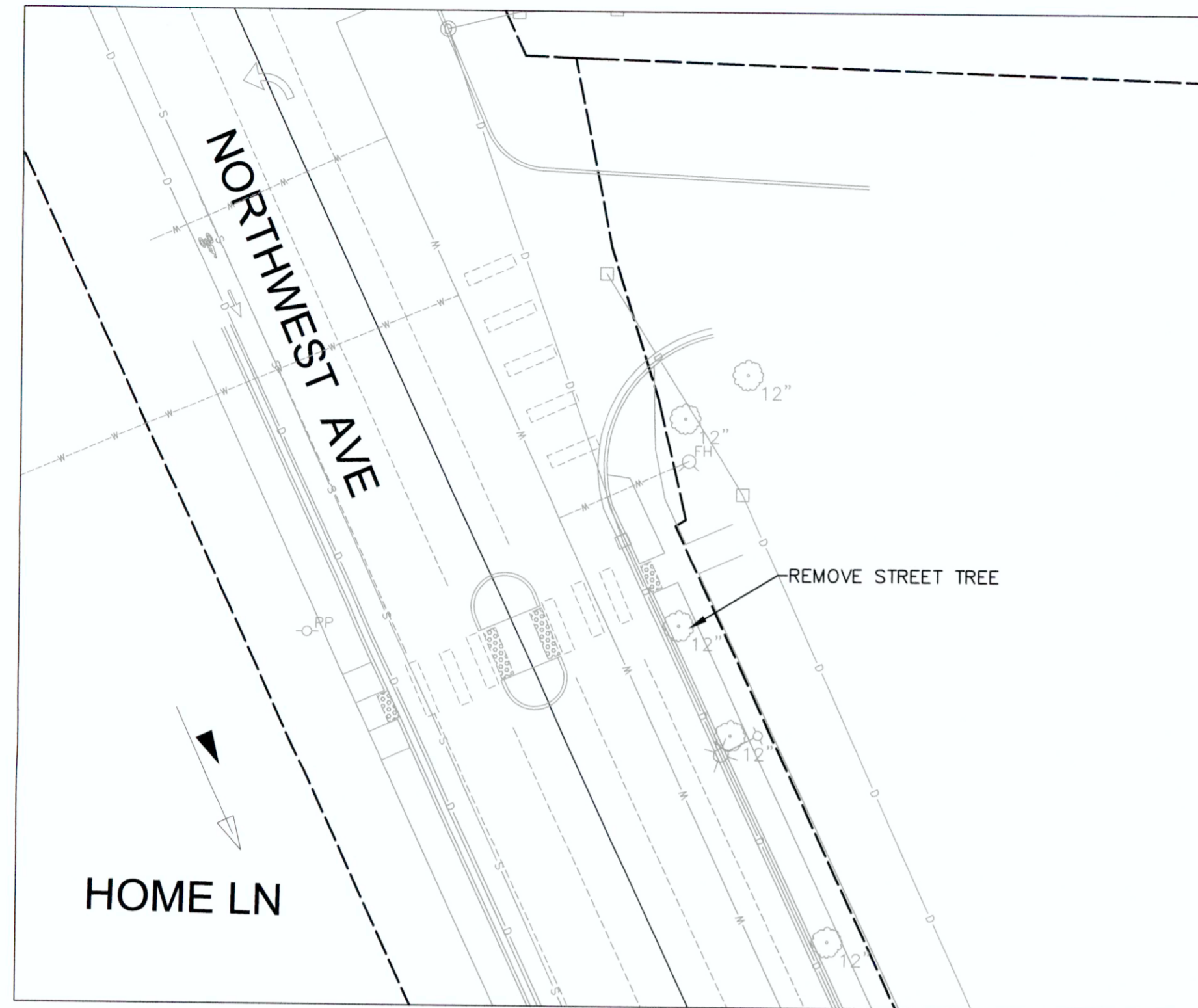
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Vert. 1"=NA

**DATUM**  
NAD 83/98  
NAVD 88

Job. No. ES-0563  
Date 02/2023  
Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
DEMO AND SWPPP INTERSECTIONS 1, 2, 3

**SHEET**  
23 OF 45

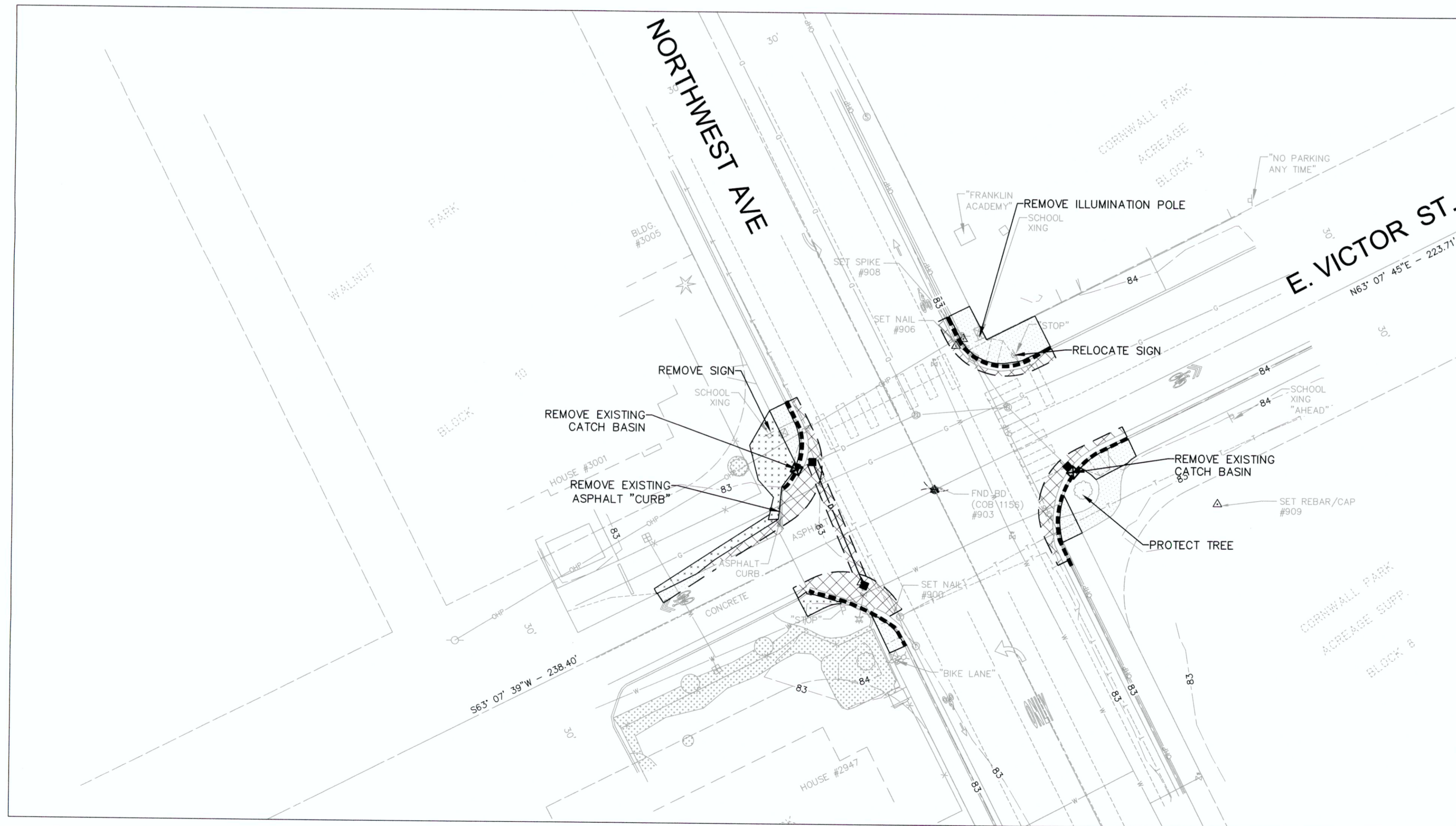
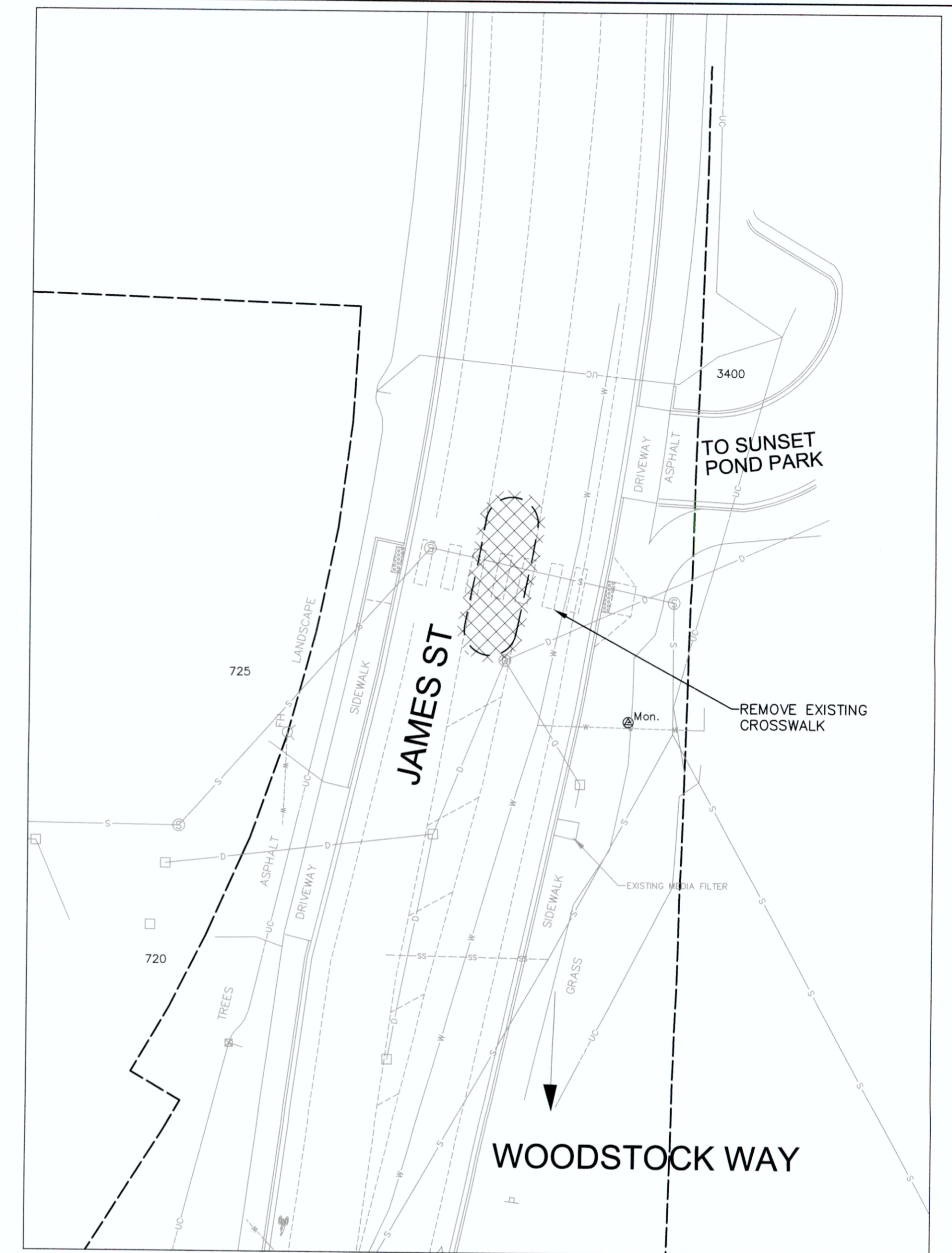


**DEMOLITION LEGEND**

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ▨ ASPHALT REMOVAL
- ▩ CONCRETE REMOVAL
- ▤ CLEARING AND GRUBBING

**EROSION CONTROL LEGEND**

- ☒ CATCH BASIN INSERT



4			
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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
**ENGINEERING DIVISION**

**SCALE**  
 Horiz. 1" = 20'  
 Vert. 1" = NA

**DATUM**  
 NAD 83/98  
 NAVD 88

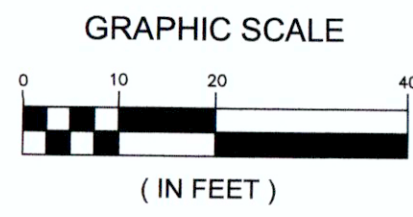
Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
**DEMO & TESC INTERSECTIONS 4, 5, & 6**

SHEET 24 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923



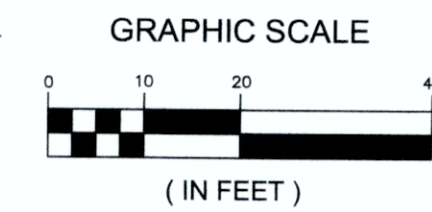
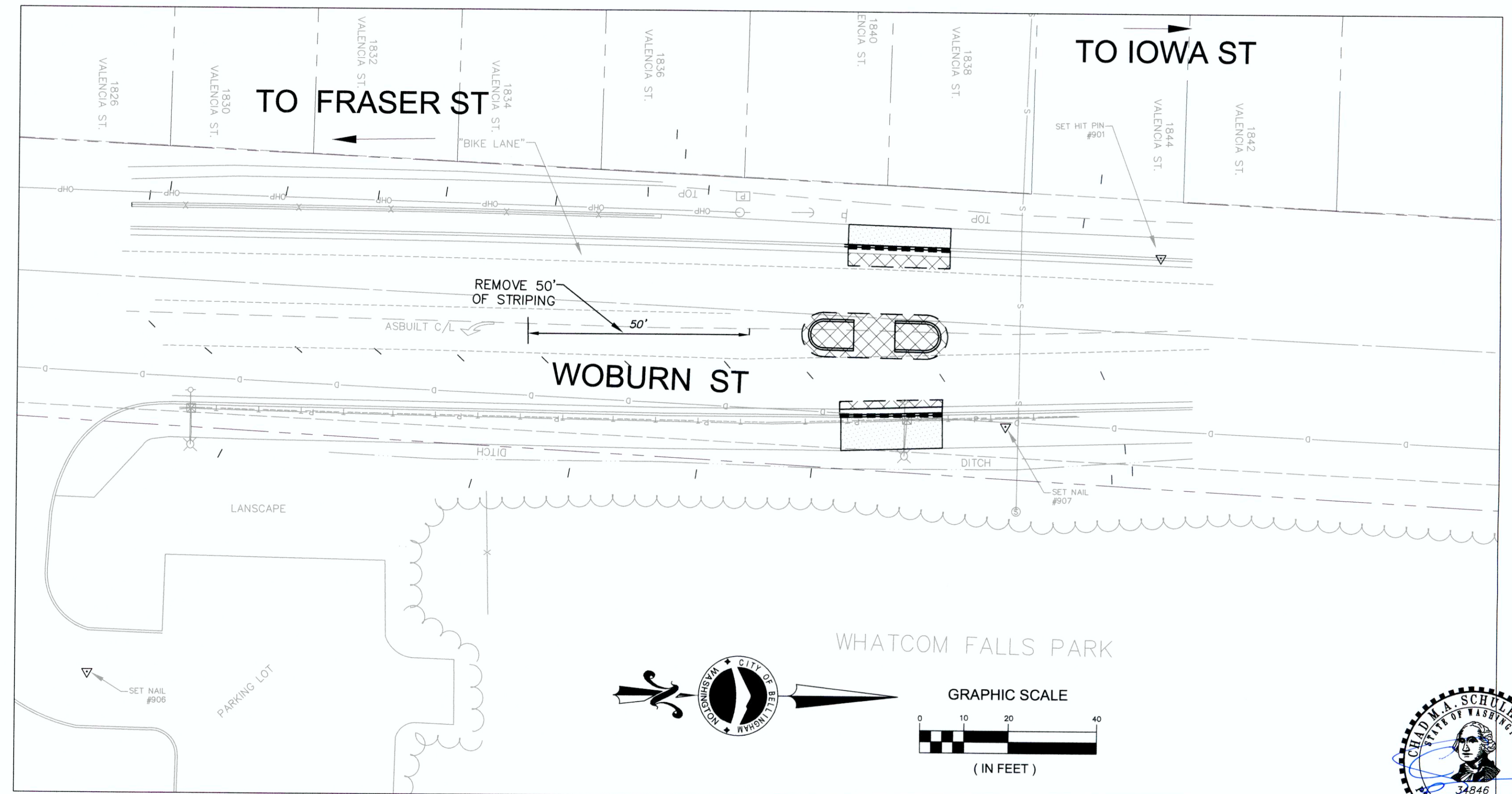
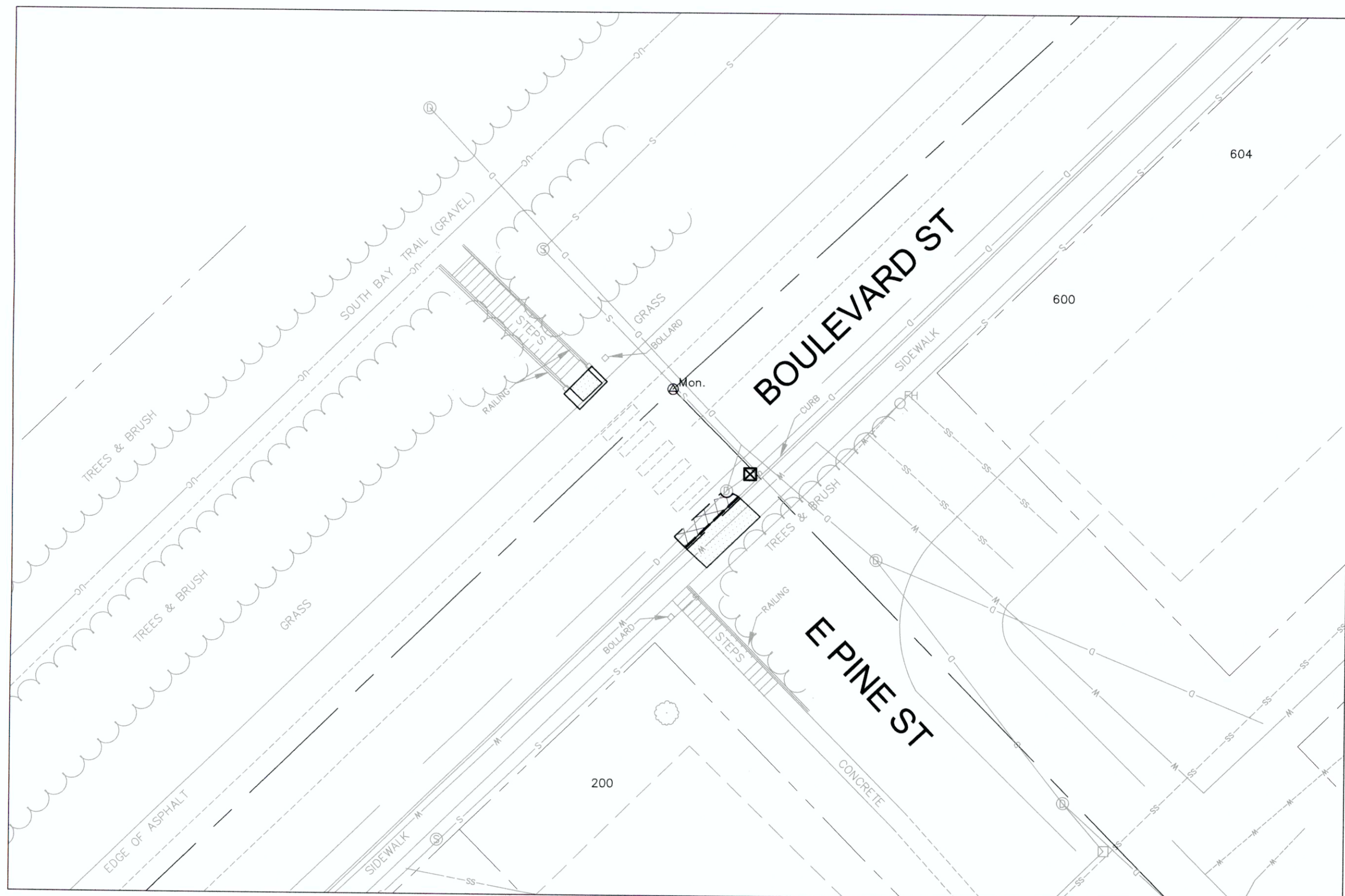
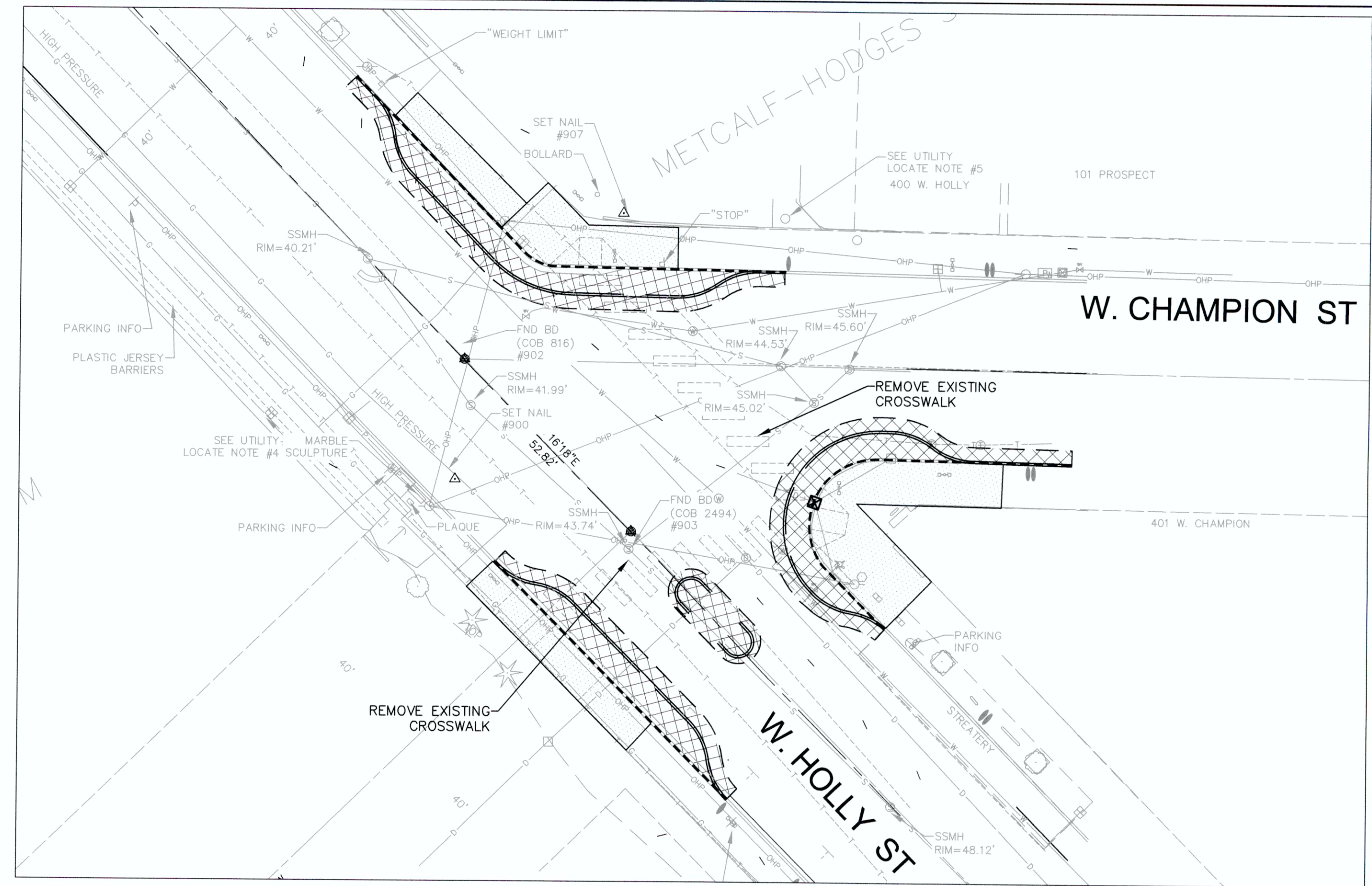


**DEMOLITION LEGEND**

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ▨ ASPHALT REMOVAL
- ▩ CONCRETE REMOVAL
- ▤ CLEARING AND GRUBBING

**EROSION CONTROL LEGEND**

- ☒ CATCH BASIN INSERT



4			
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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

**SCALE**  
 Horiz. 1"=20'  
 Vert. 1"=NA

**DATUM**  
 NAD 83/98  
 NAVD 88

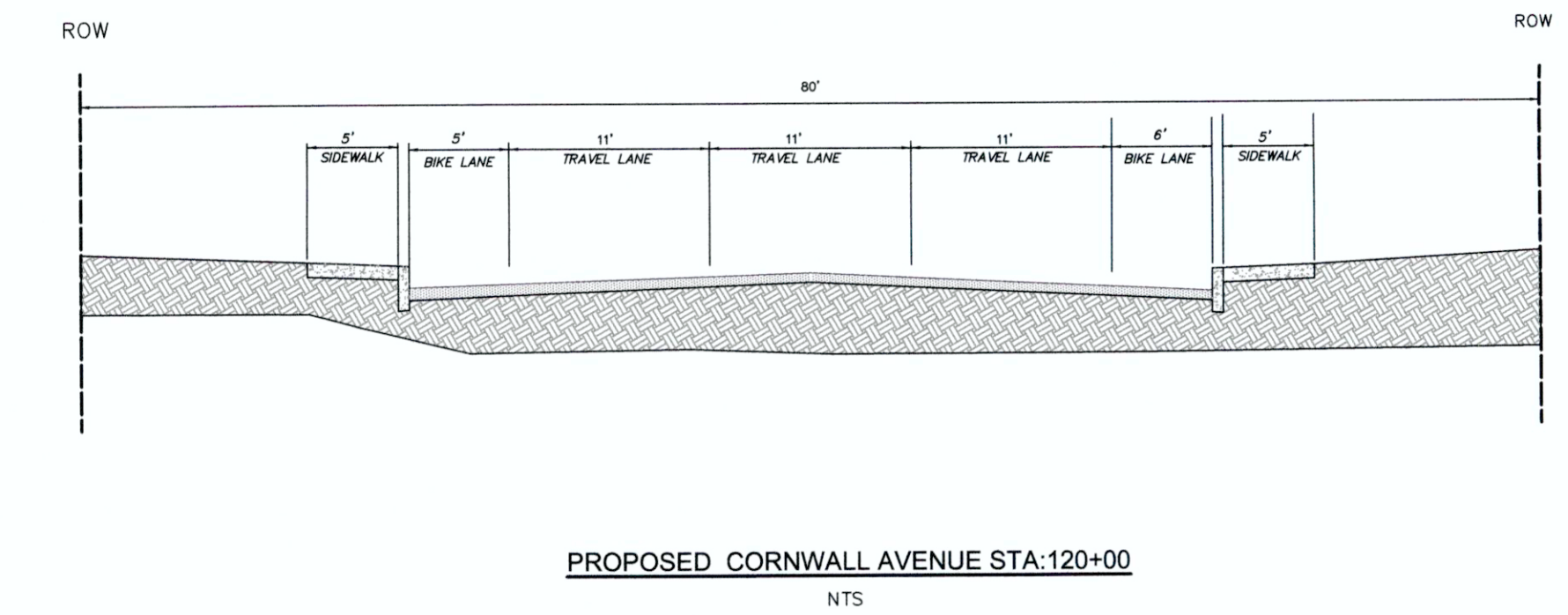
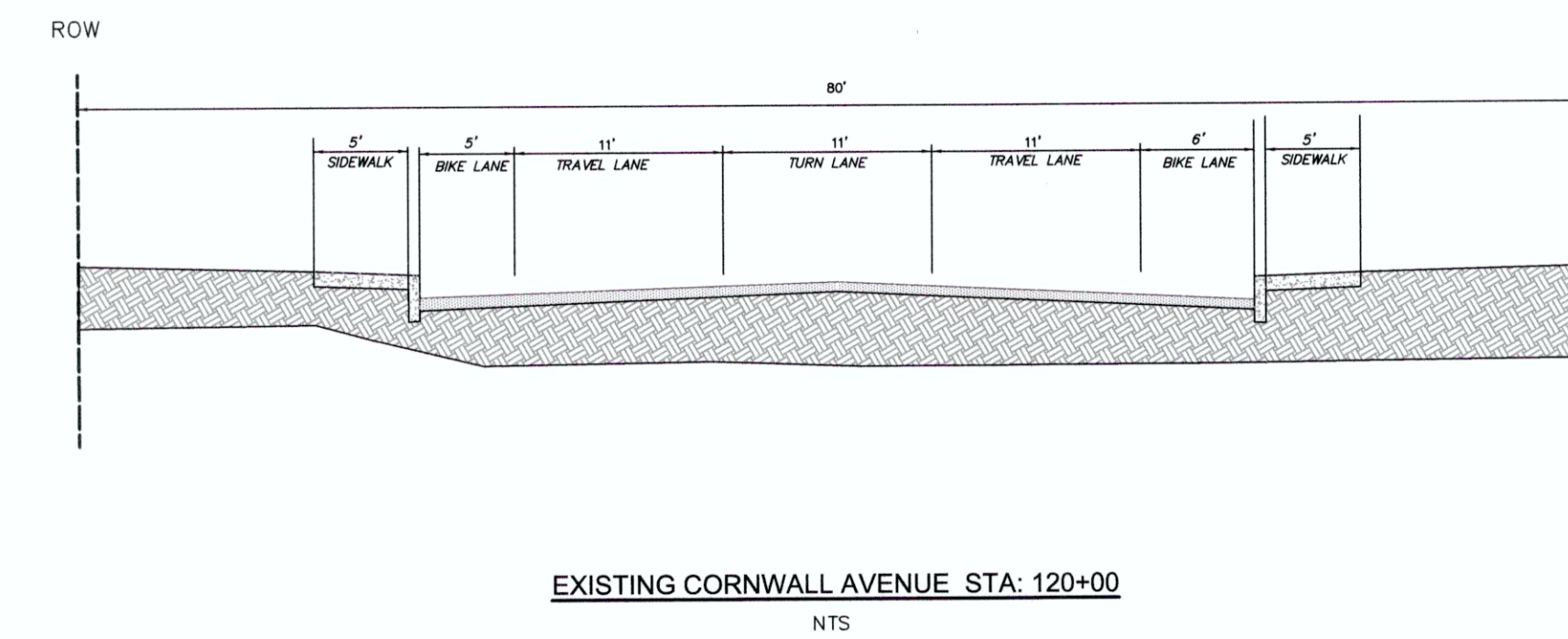
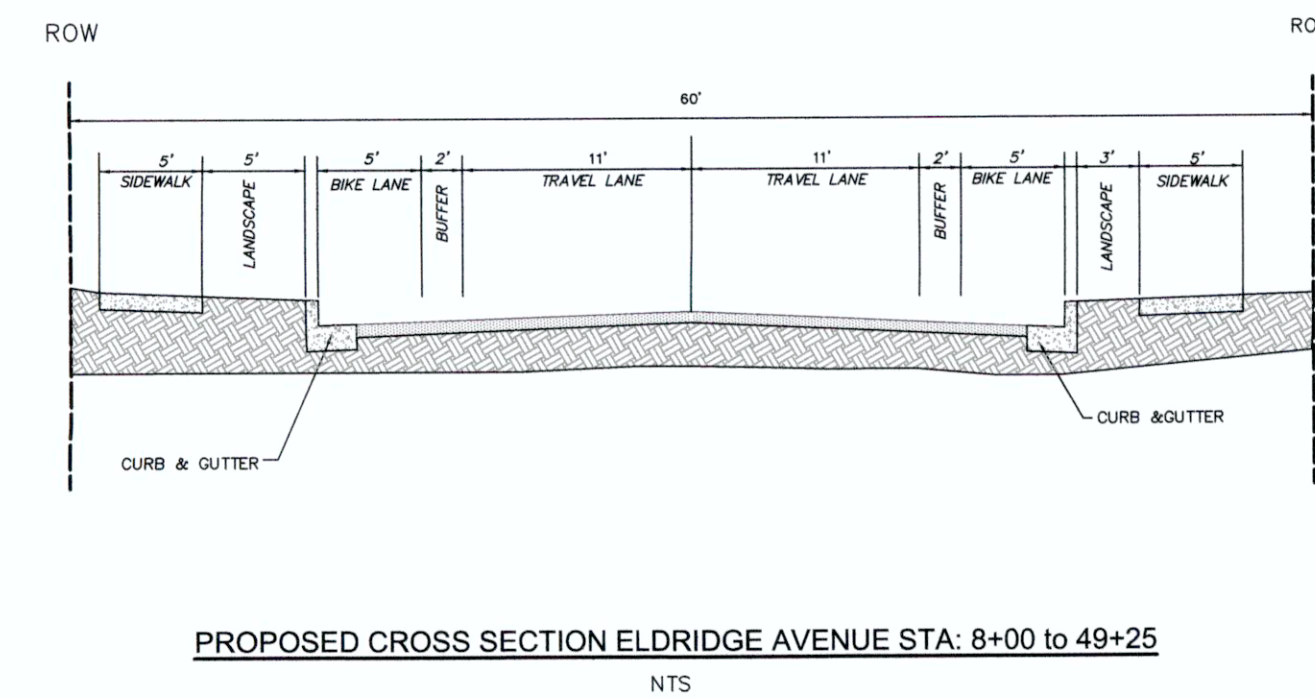
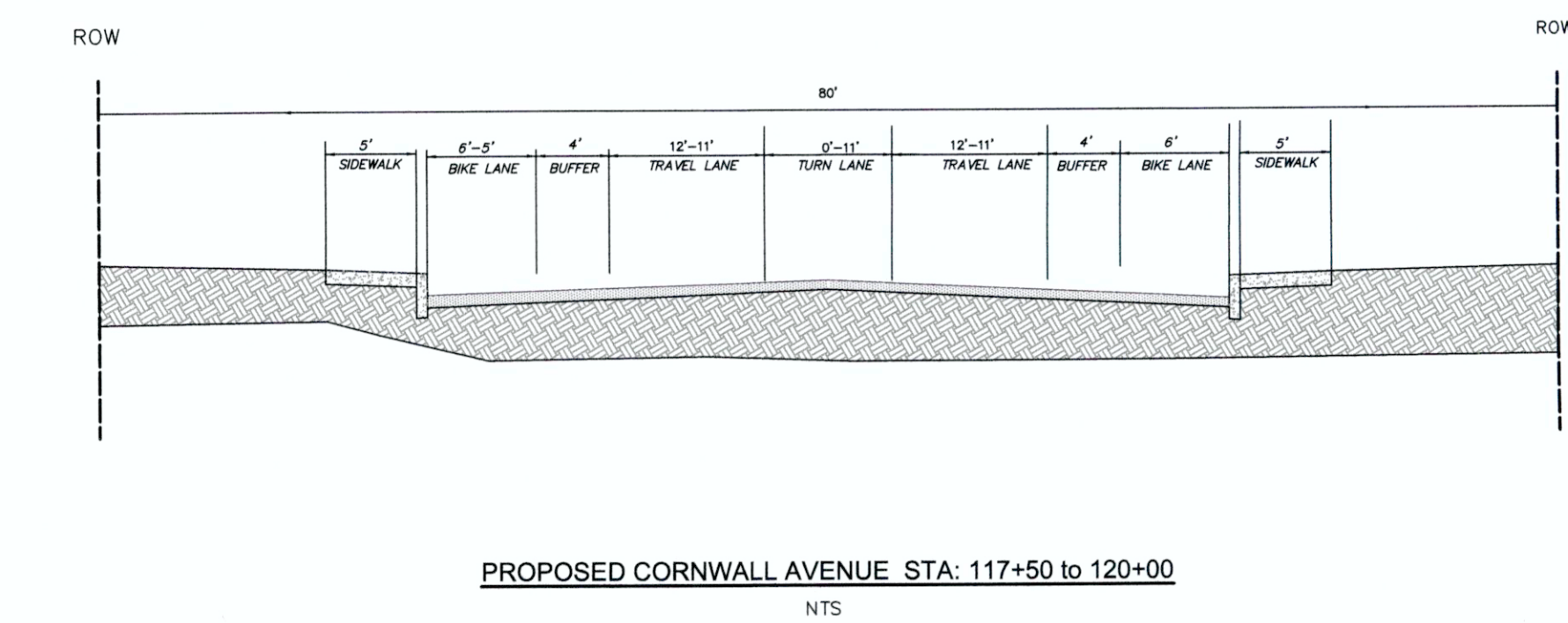
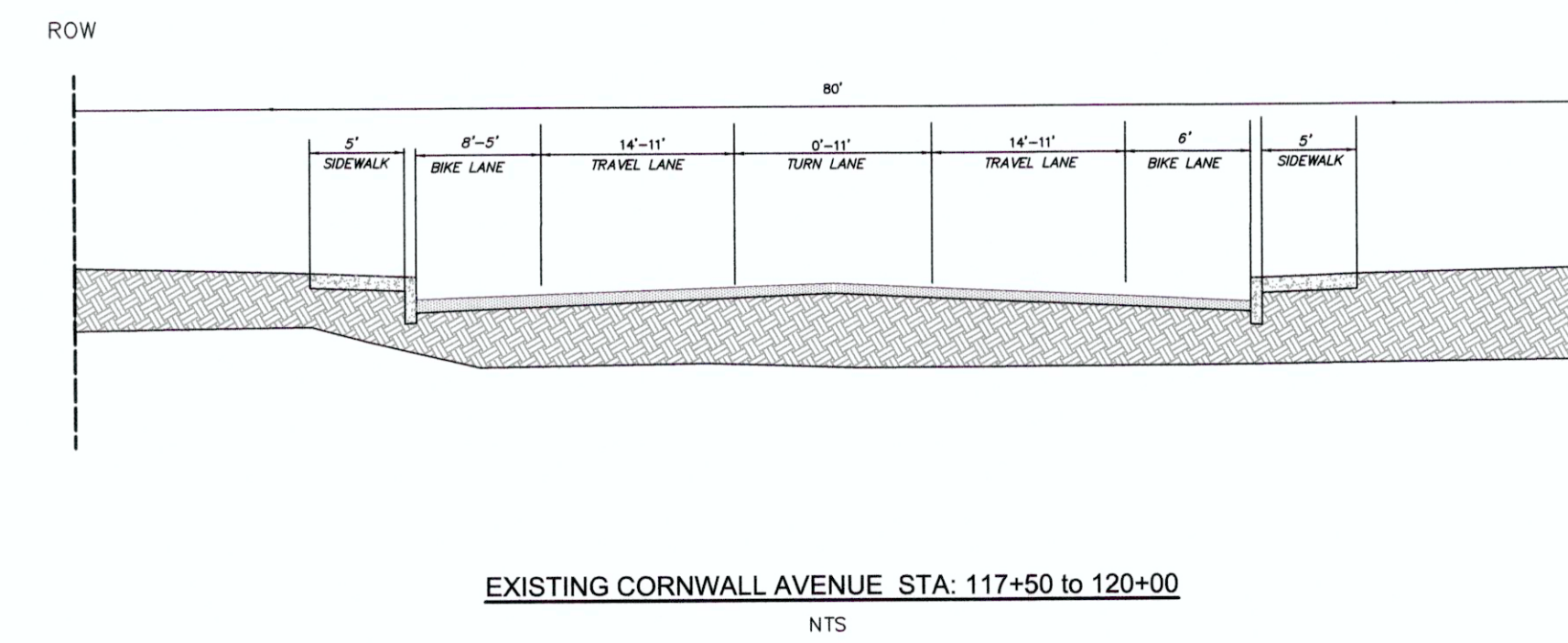
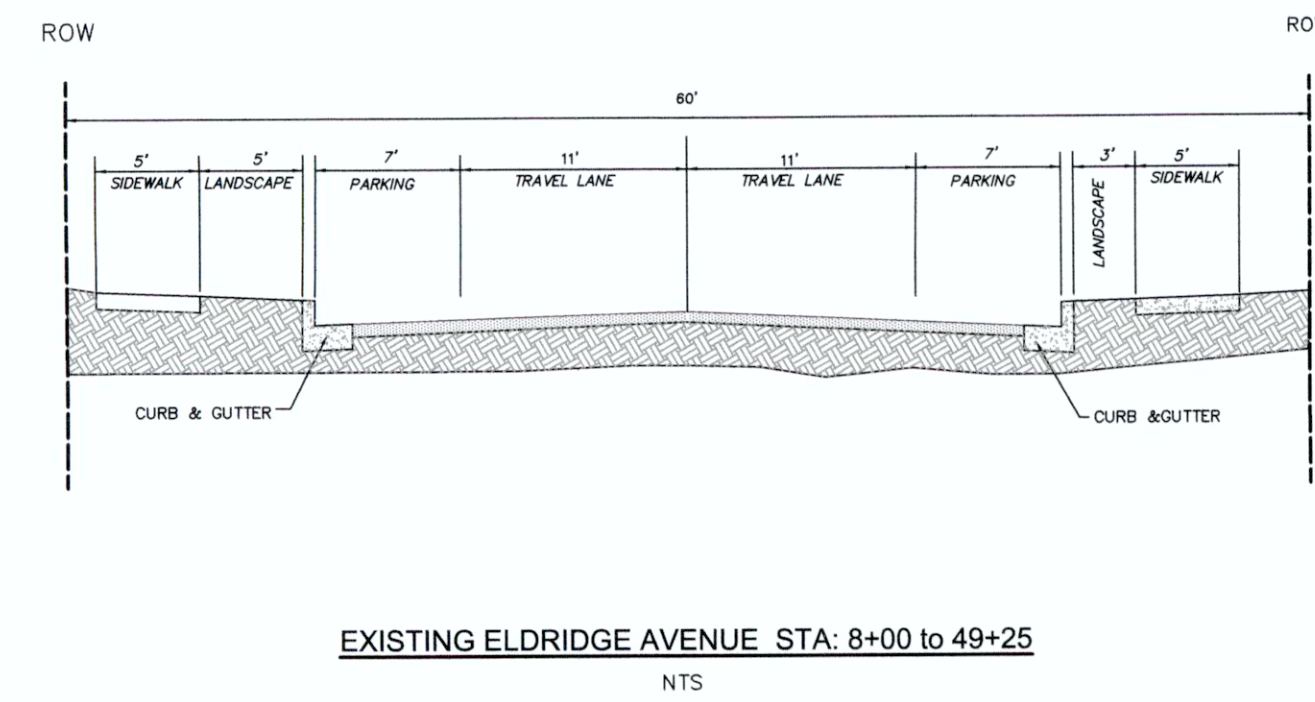
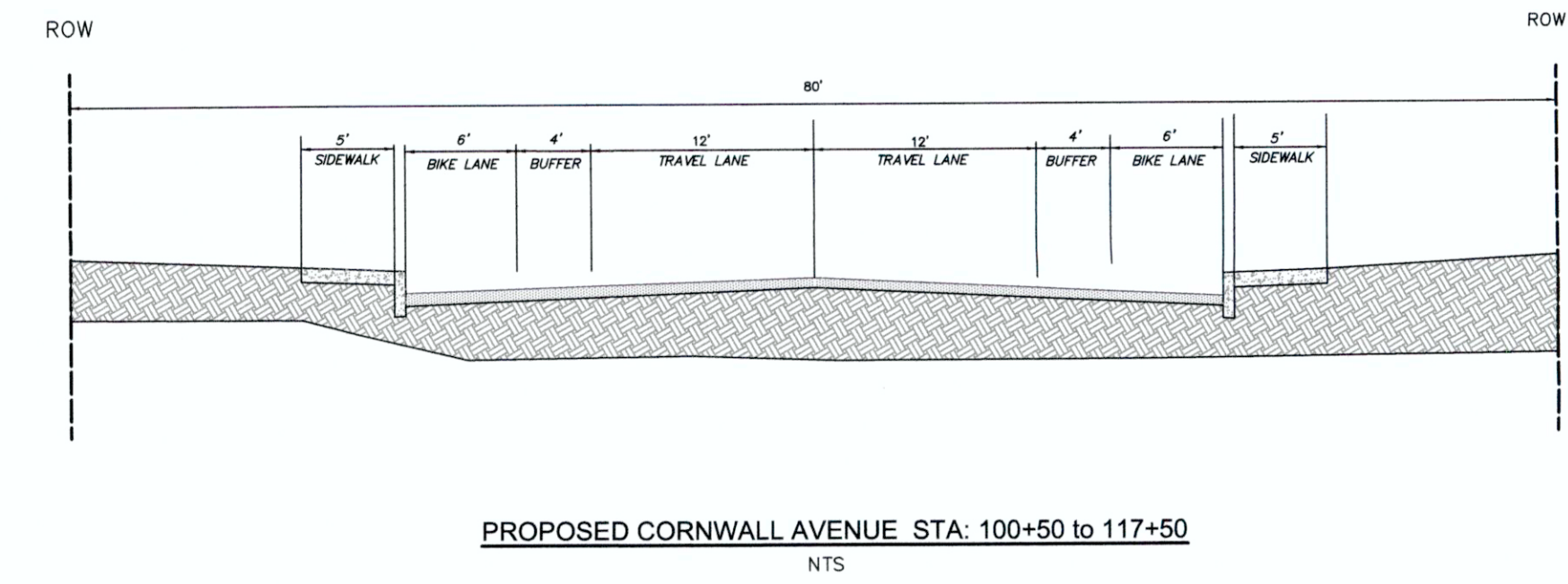
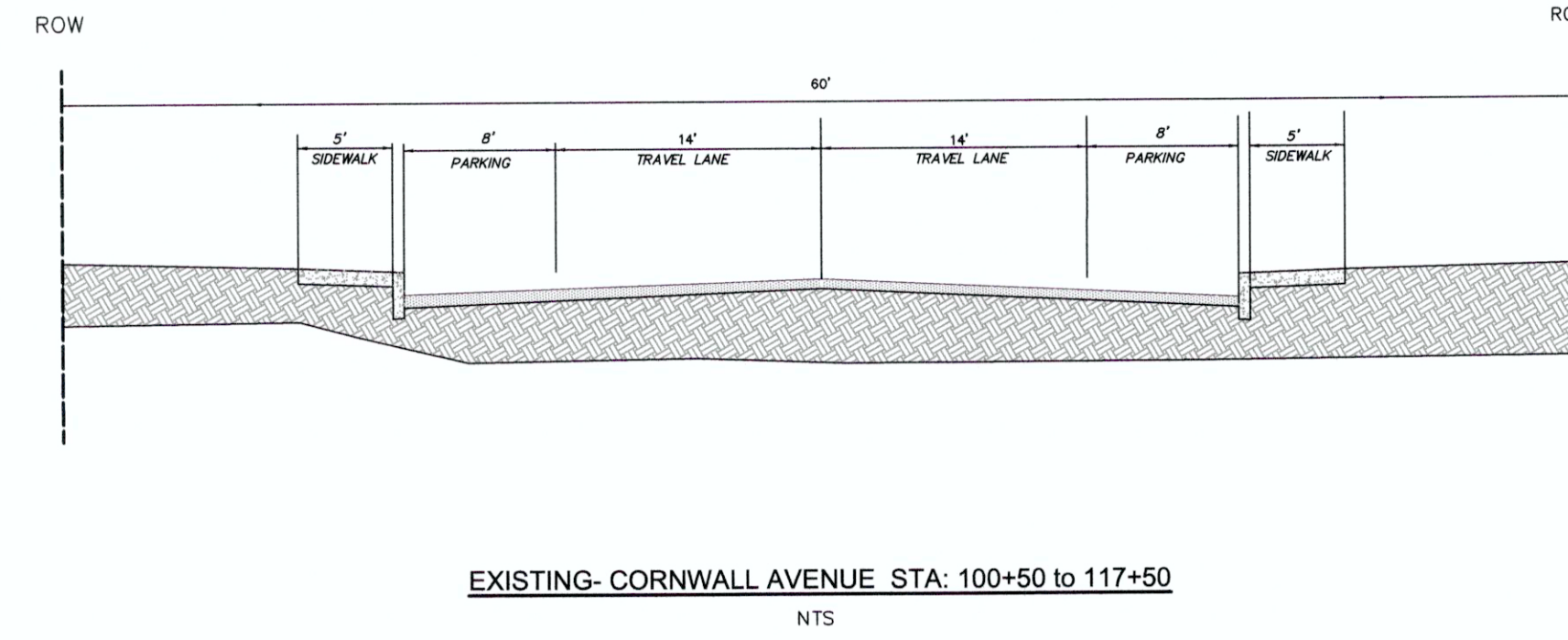
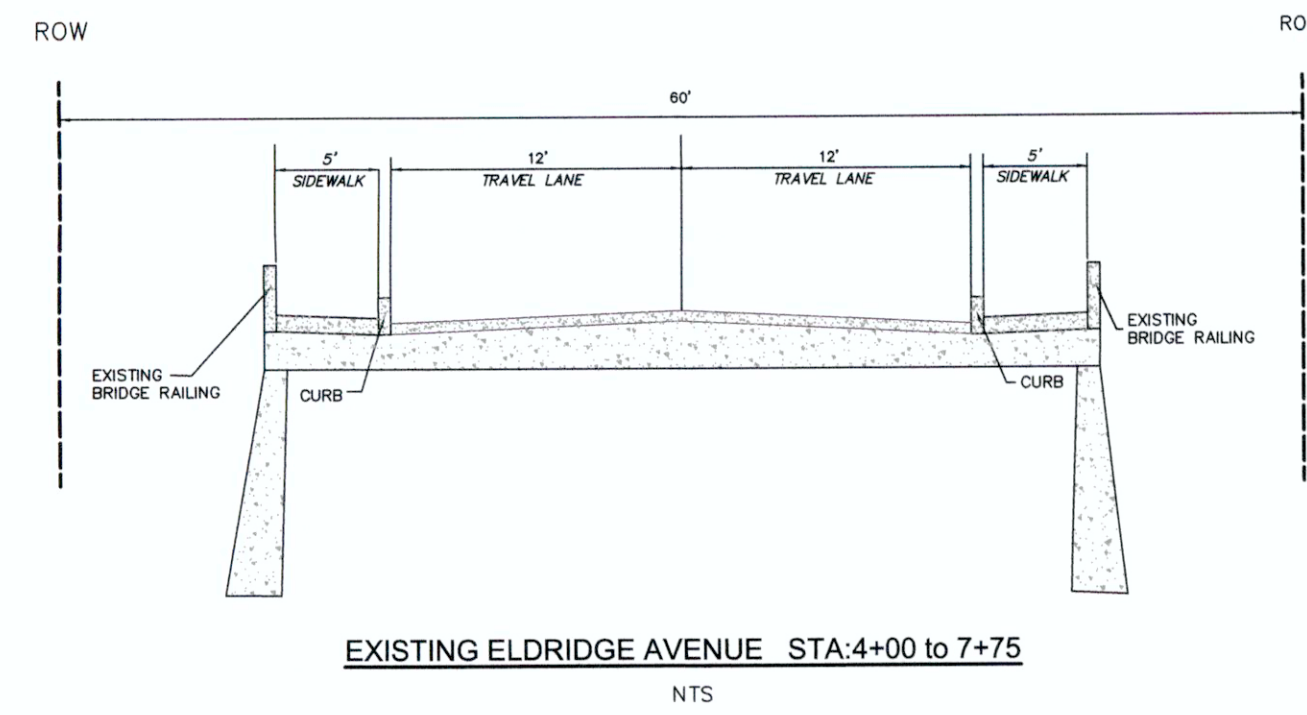
Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB

**WESTSIDE NON MOTORIZED IMPROVEMENTS**  
**DEMO & TESC INTERSECTIONS 9, 10, & 13**

SHEET 25 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7900

24 May 2023



Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
DESIGNED/DRAWN ELH  
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
CITY ENGINEER C.M.A.S.  
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

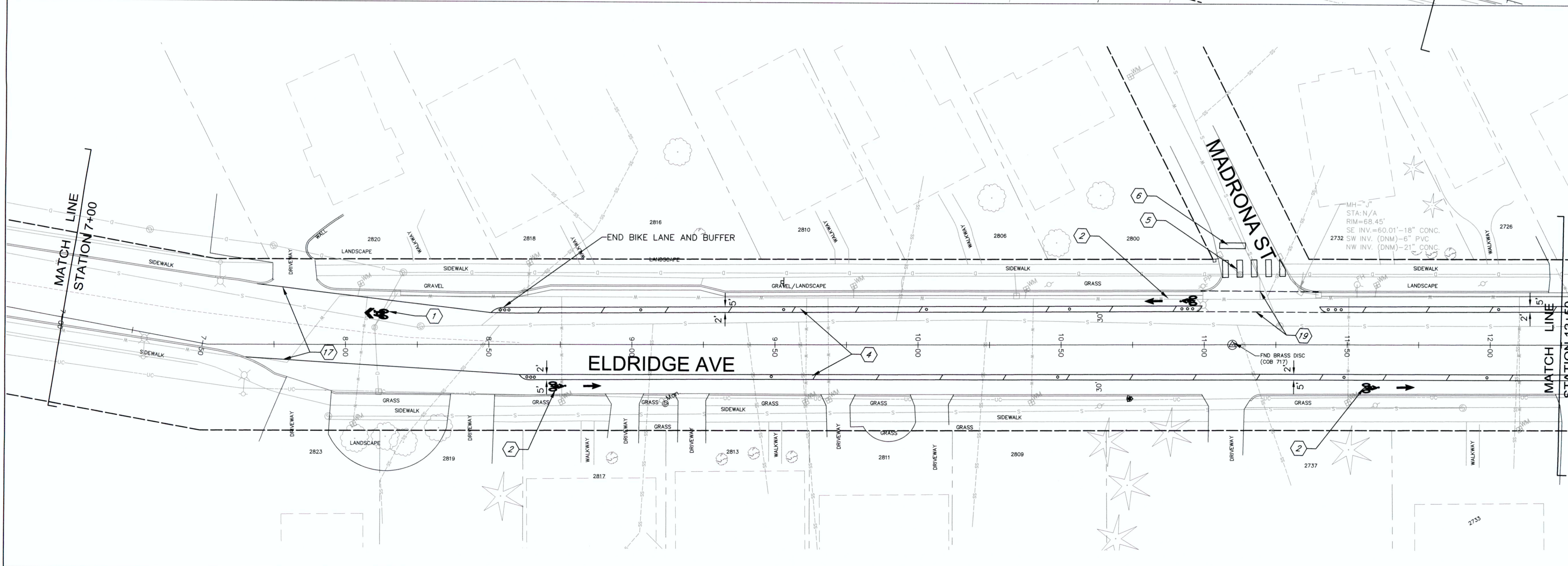
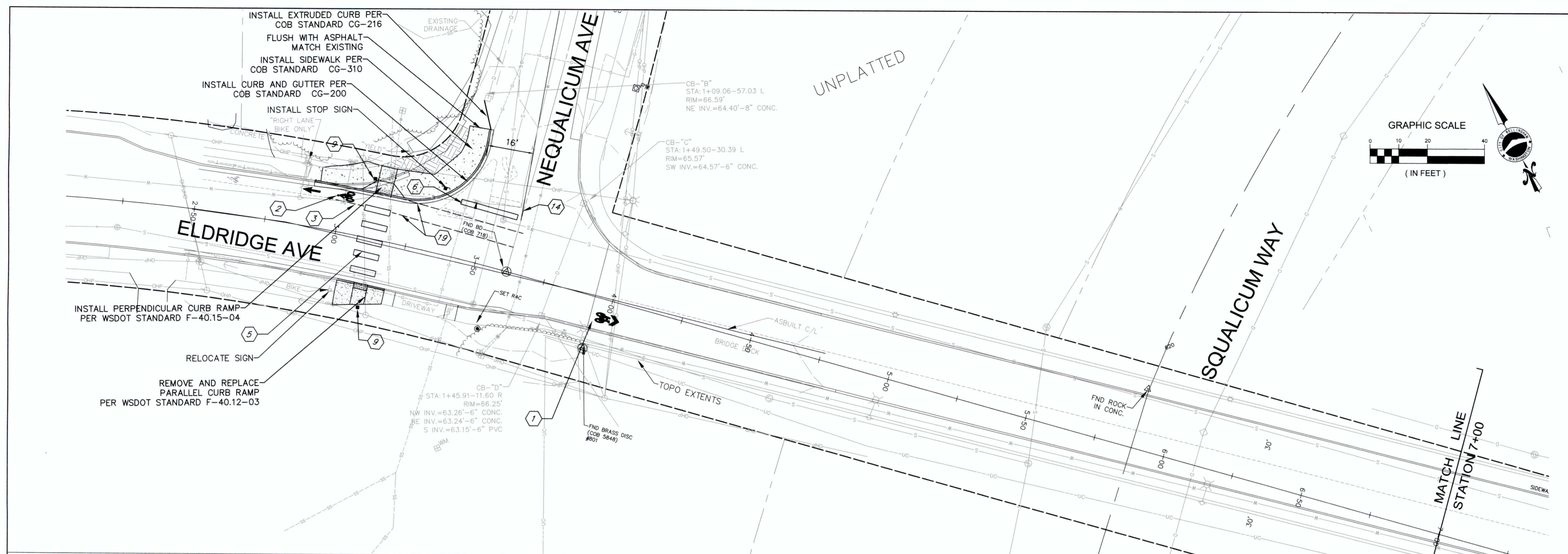
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DATUM  
NAD 83/98  
NAVD 88

Job. No. ES-0563  
Date 02/2023  
Field Bk. FB

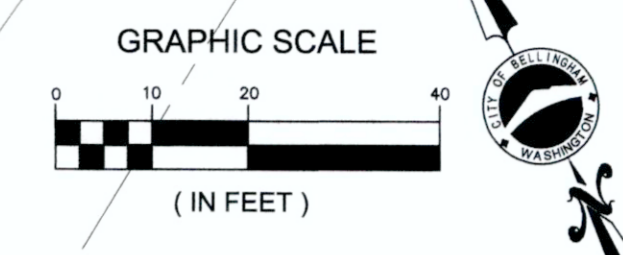
WEST SIDE NON-MOTORIZED IMPROVEMENTS  
TYPICAL SECTIONS EXISTING AND PROPOSED

SHEET 26 OF 45



**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
- 10 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
- 11 INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
- 12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



4			
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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

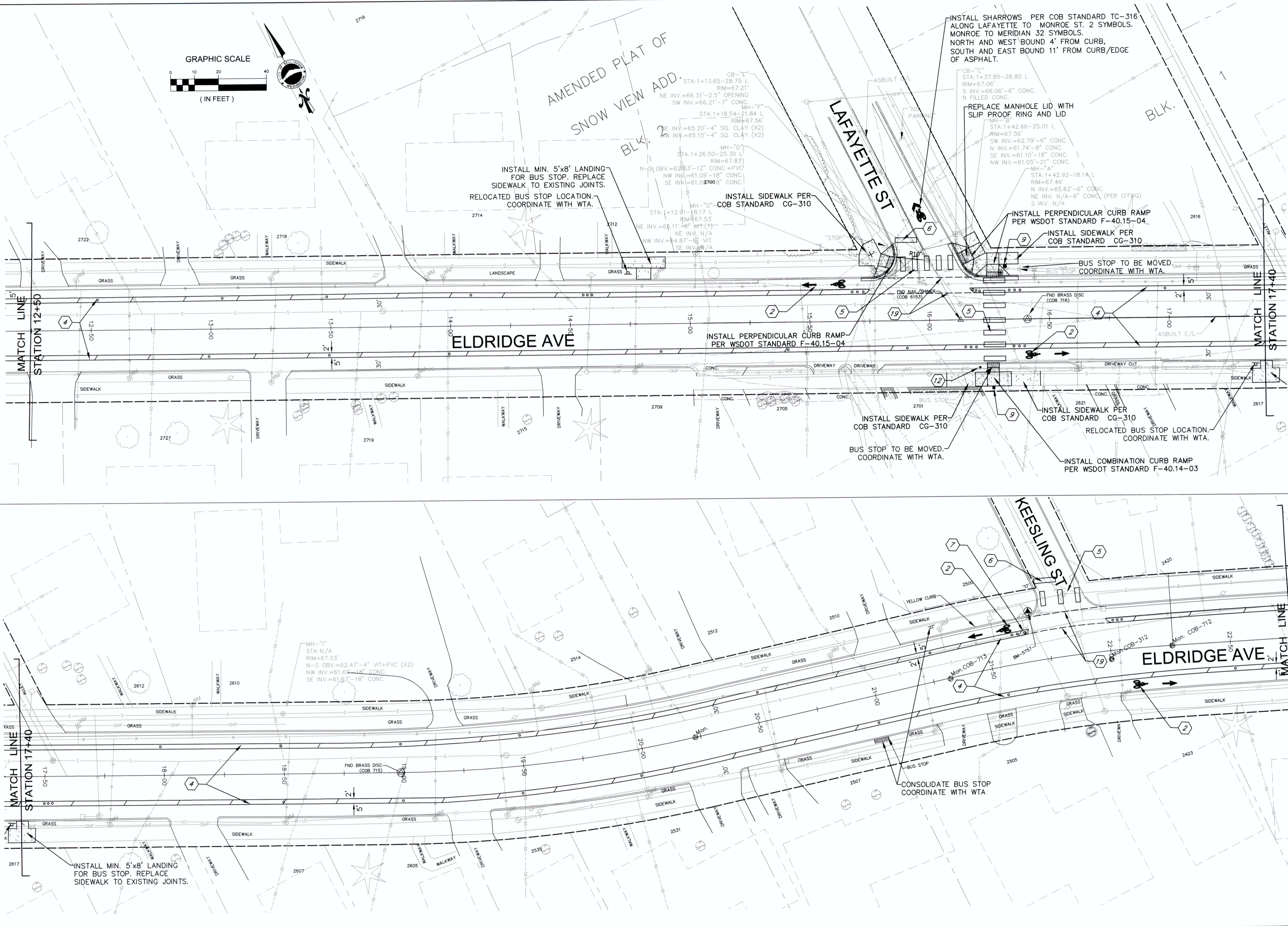
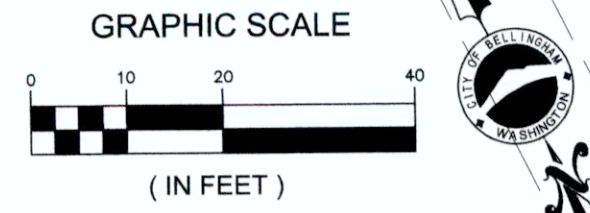
Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 ELDRIDGE AVE. STA: 2+50 TO 12+25

SHEET 27 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923





**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
- 10 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
- 11 INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
- 12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

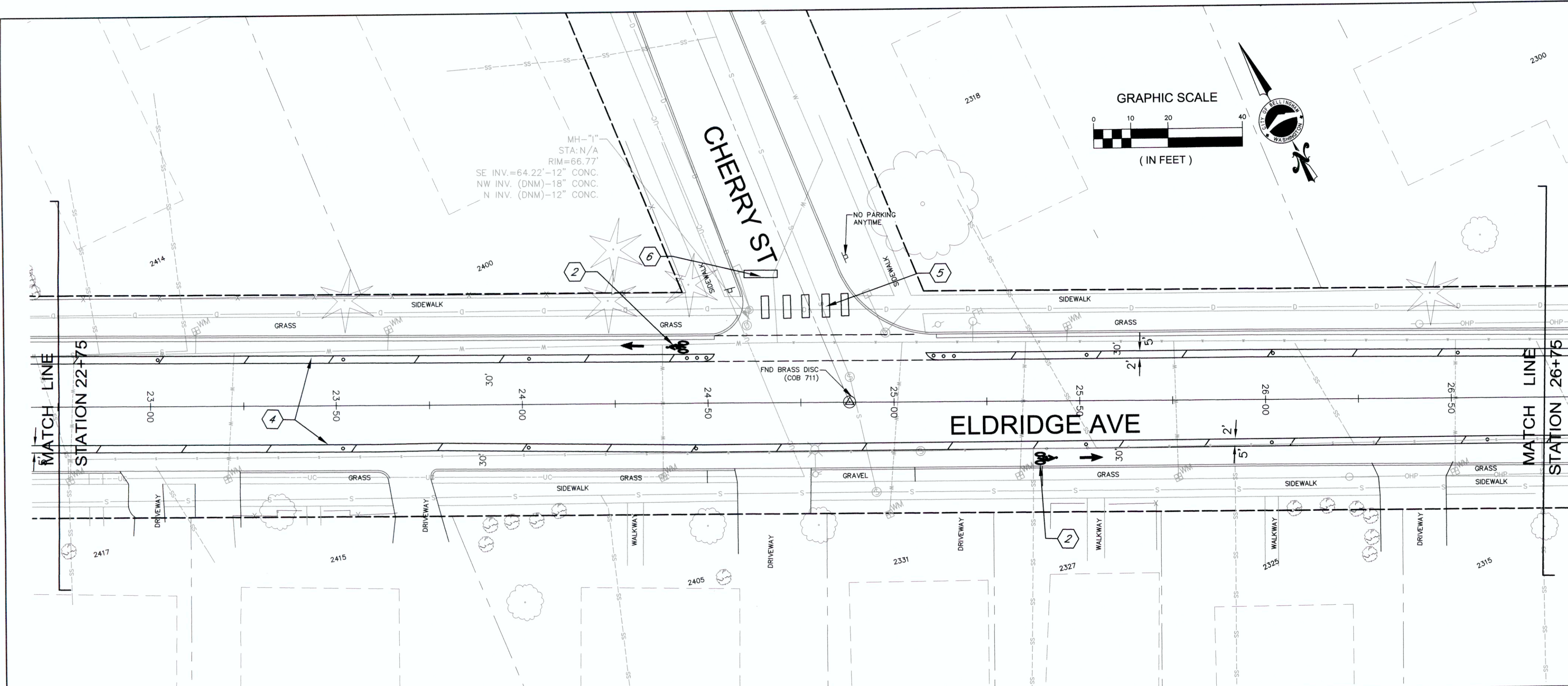
Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 ELDRIDGE AVE. STA: 12+25 TO 22+75

SHEET 28 OF 45

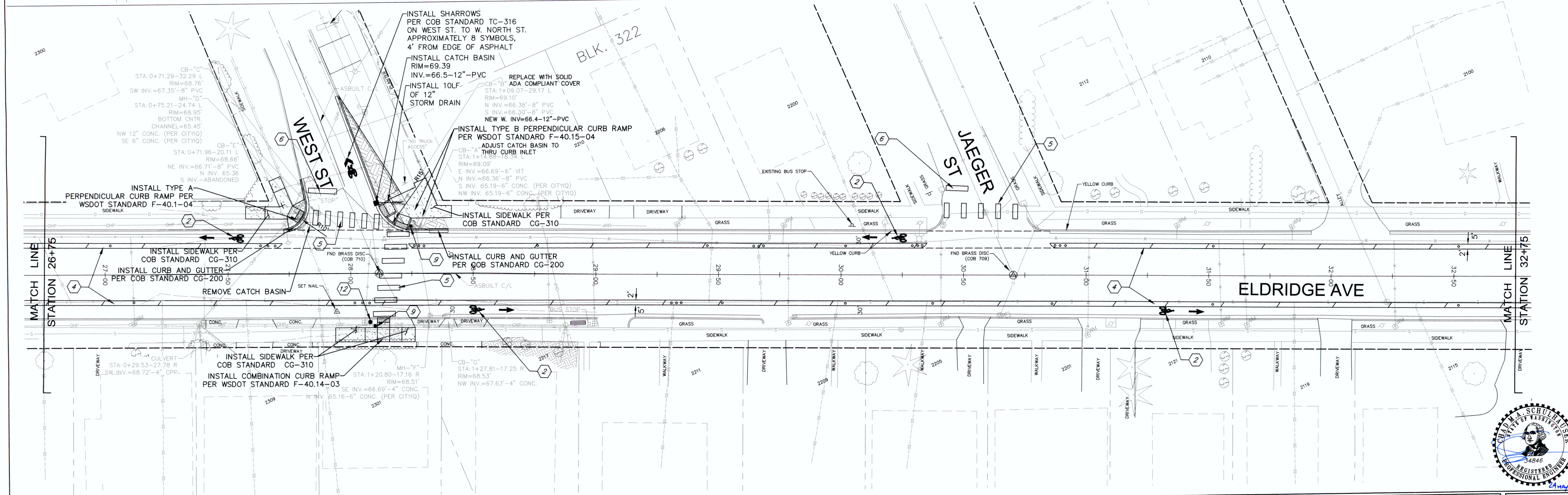
CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923





**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
- 10 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
- 11 INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
- 12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

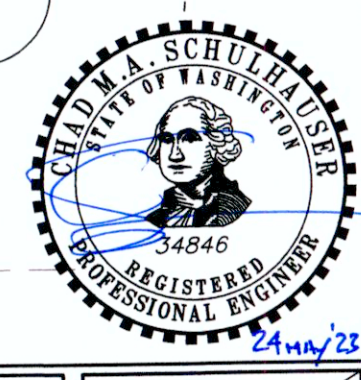
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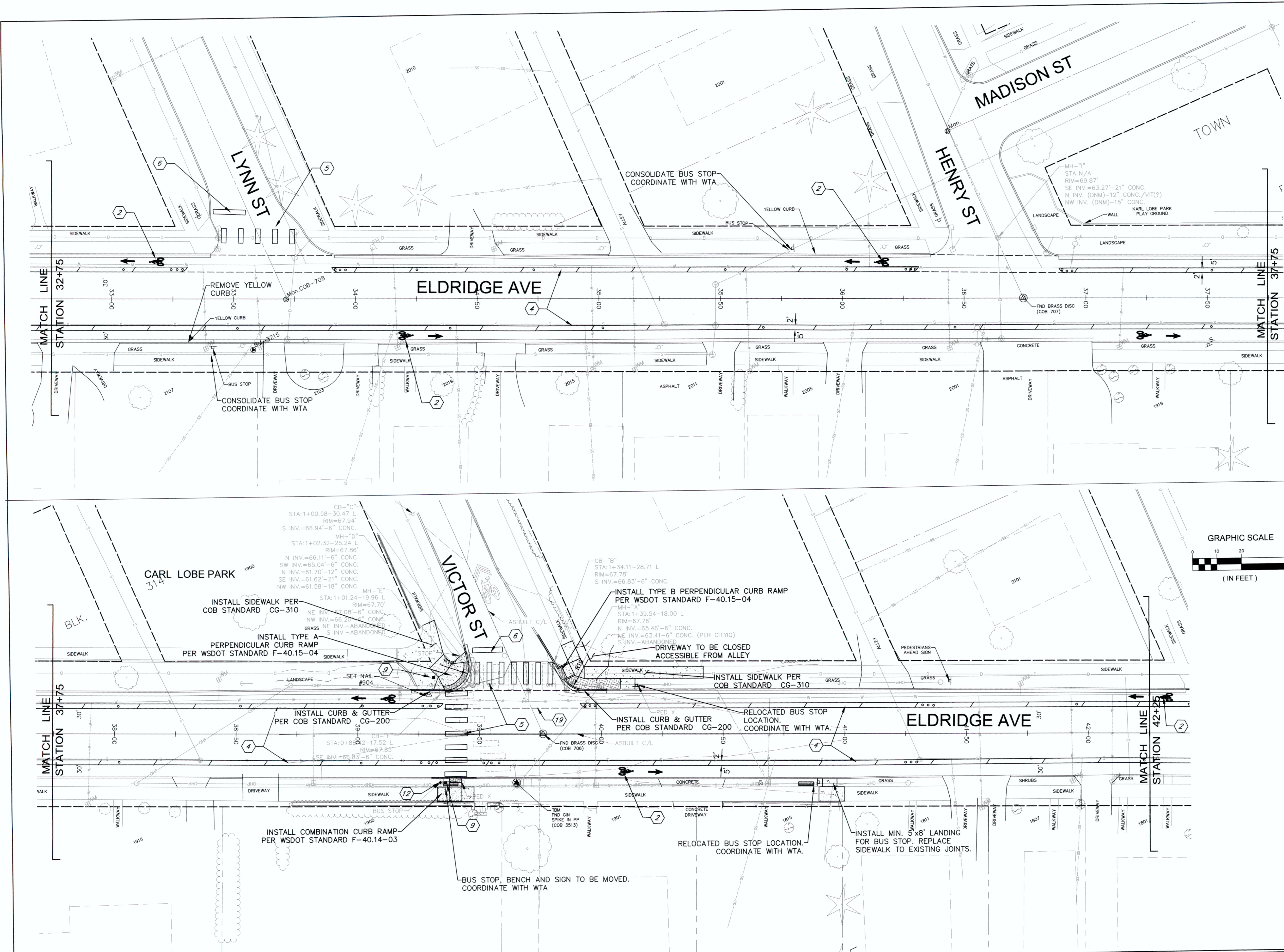
DATUM  
 NAD 83/98  
 NAVD 88

Job No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 ELDRIDGE AVE. STA: 22+75 TO 32+75

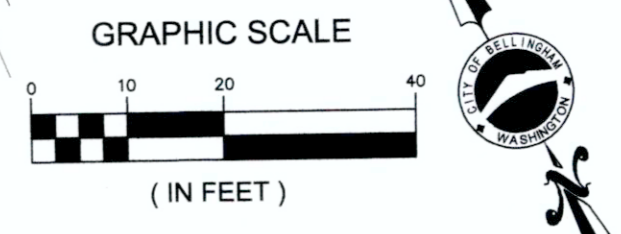
SHEET 29 OF 45





**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
- 10 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
- 11 INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
- 12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIP PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



NO.	REVISION	DATE	BY

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

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

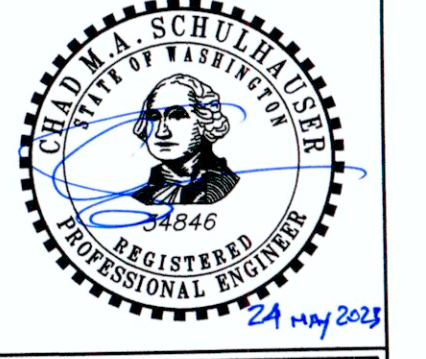
DATUM  
 NAD 83/98  
 NAVD 88

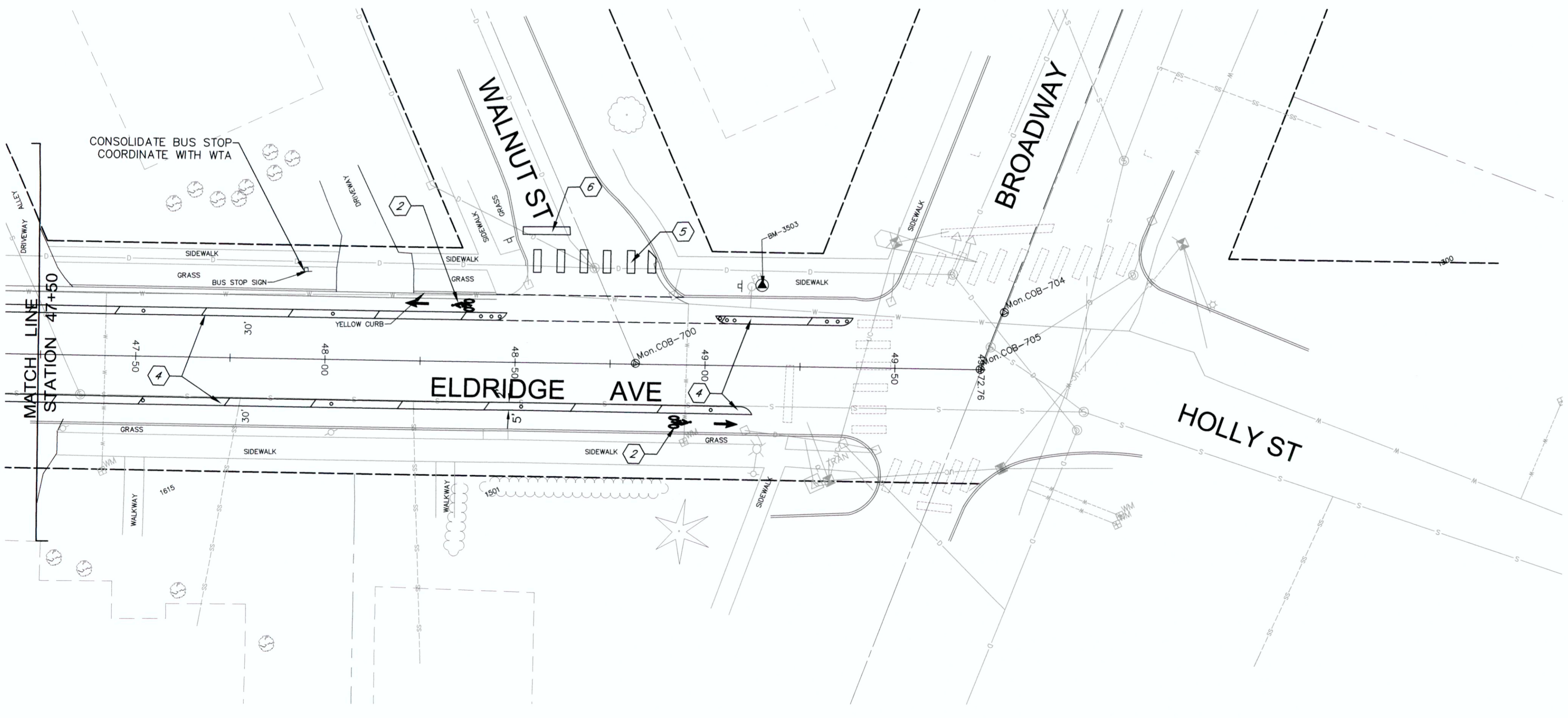
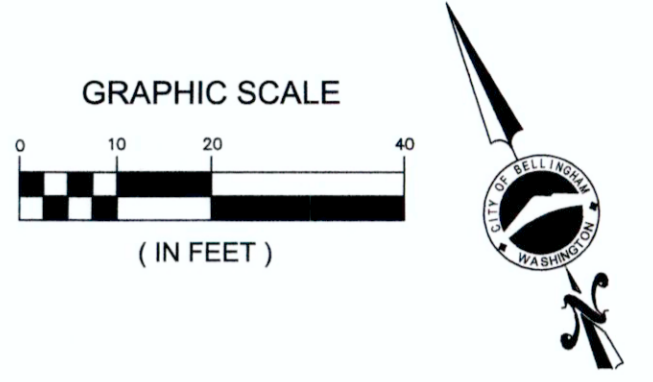
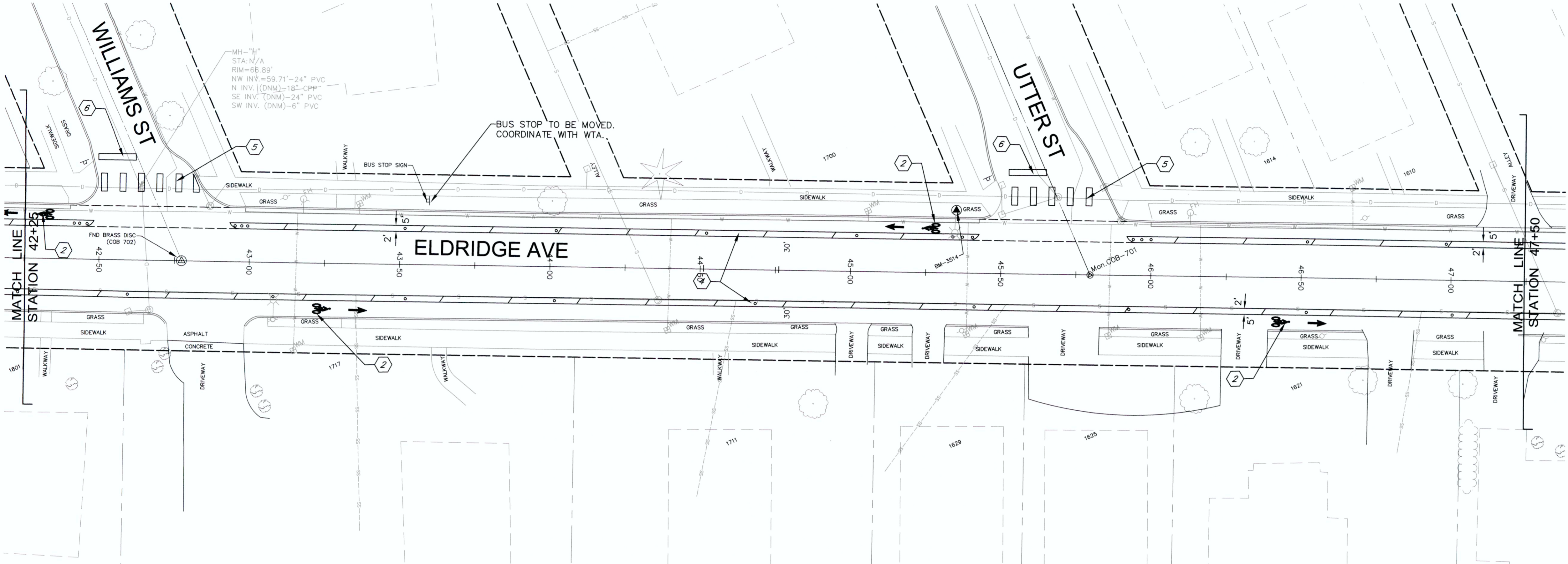
Job No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 ELDRIDGE AVE. STA: 32+75 TO 42+25

SHEET 30 OF 45

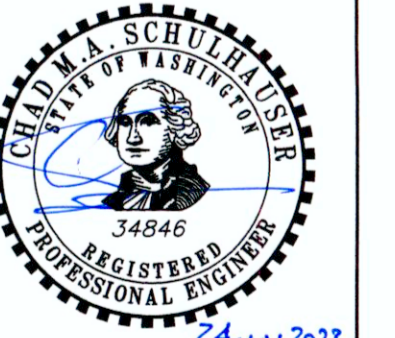
CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923





**CONSTRUCTION NOTES:**

- 1) INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2) INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3) BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4) INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5) INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
- 6) 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7) BUFFER TRANSITION PER DETAIL SHEET 39
- 8) INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9) INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
- 10) INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
- 11) INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
- 12) INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13) INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14) INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15) INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16) NOT USED THIS SHEET
- 17) INSTALL 6" PLASTIC LANE LINE.
- 18) NOT USED THIS SHEET
- 19) DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



4			
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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

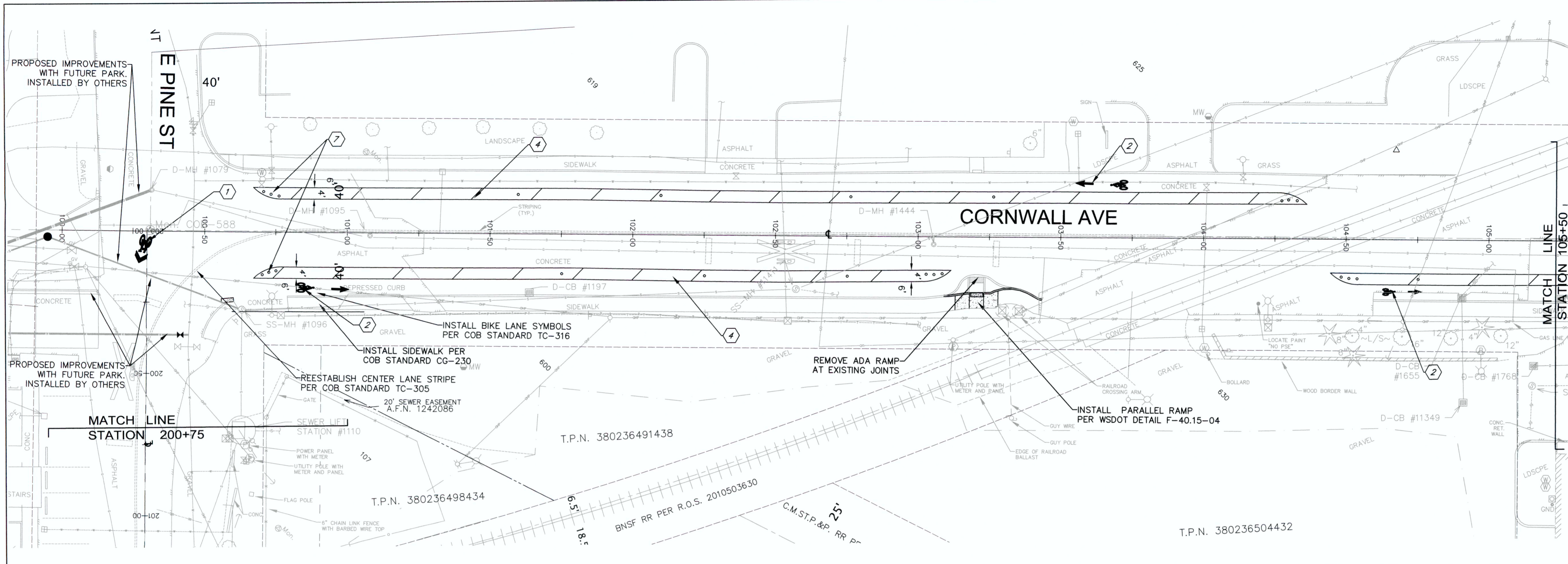
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 Vert. 1"=NA

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

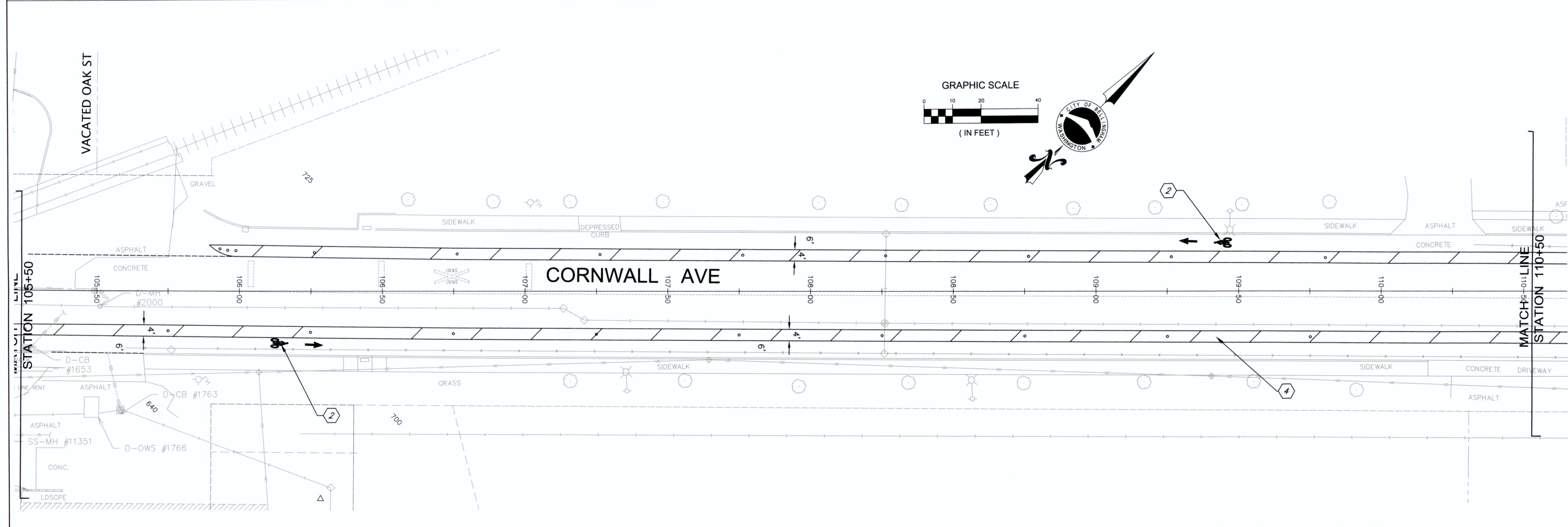
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 ELDRIDGE AVE. STA: 42+25 to 50+00

SHEET 31 OF 45



**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
- 10 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
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- 12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

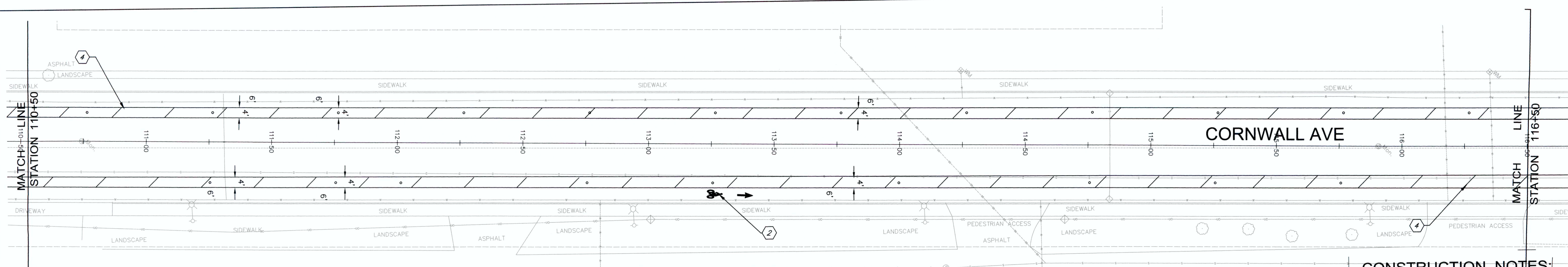
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 CORNWALL AVE. STA: 100+00 to 110+50

SHEET 32 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. PROJECT ENGINEER AT 778-7923

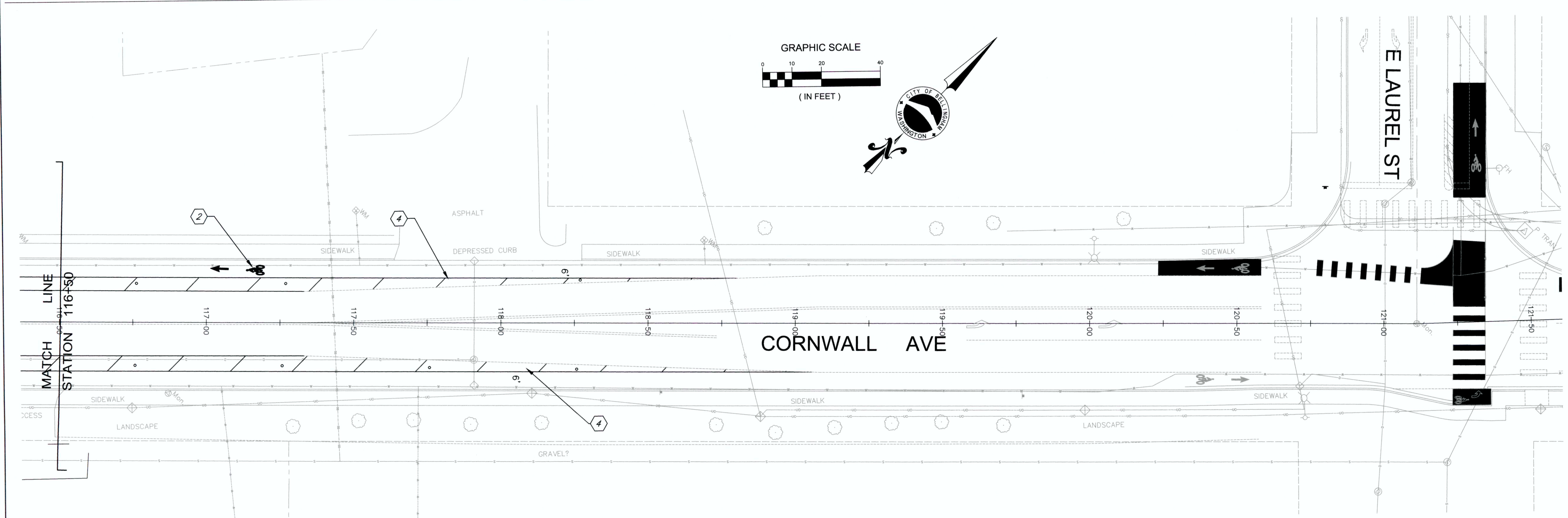






**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
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- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

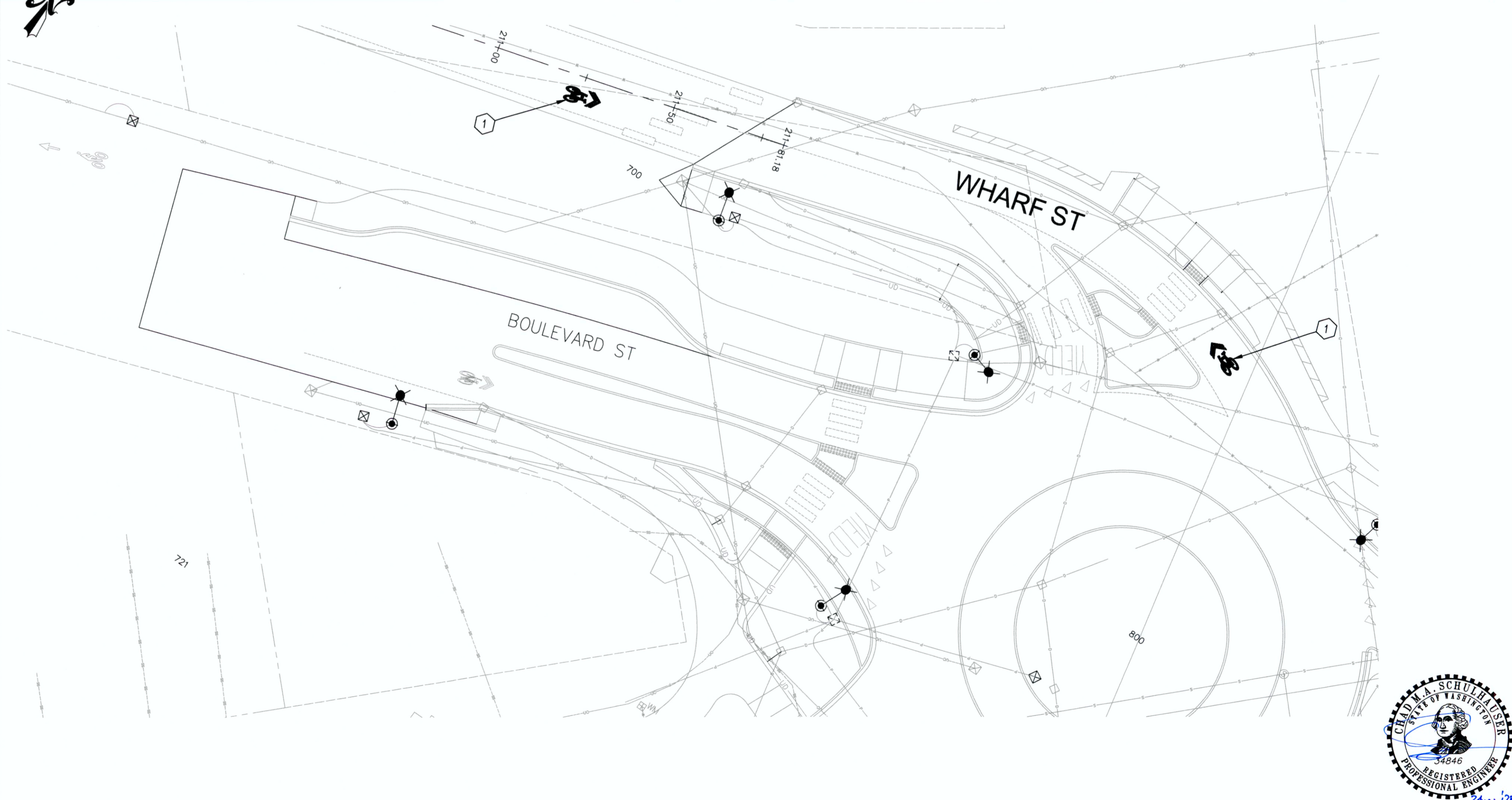
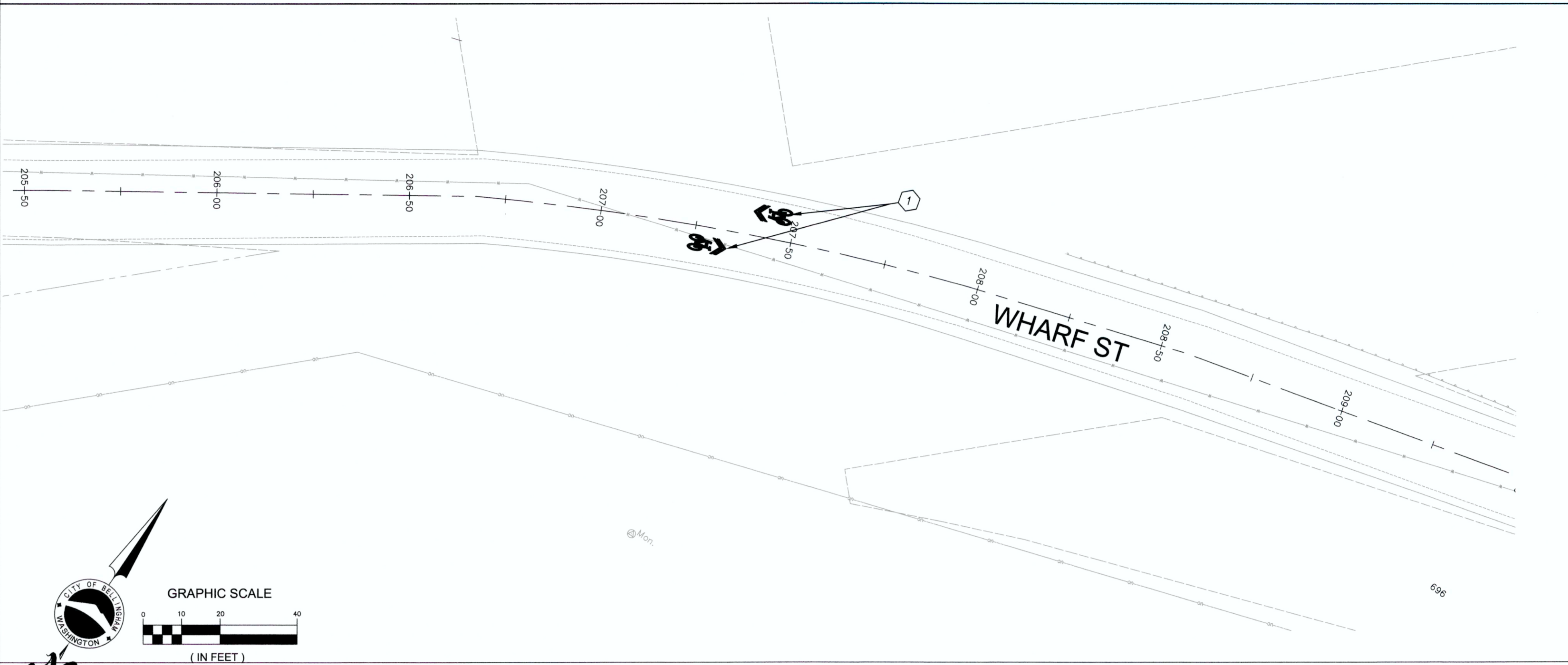
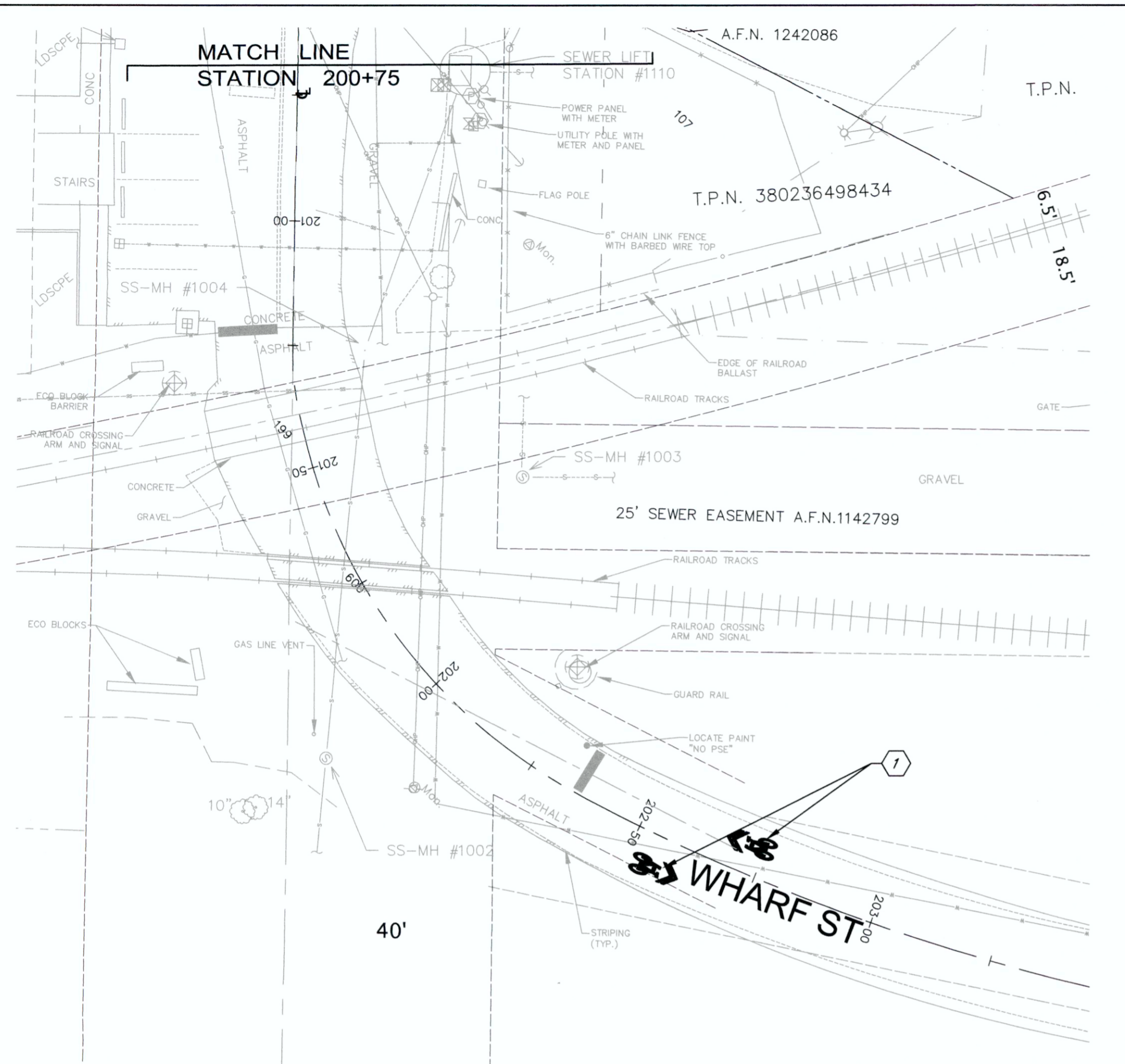
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 Vert. 1"= NA

DATUM  
 NAD 83/98  
 NAVD 88

Job No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 CORNWALL AVE. STA: 110+50 to 121+50

SHEET 33 OF 45



**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
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- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET



4			
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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

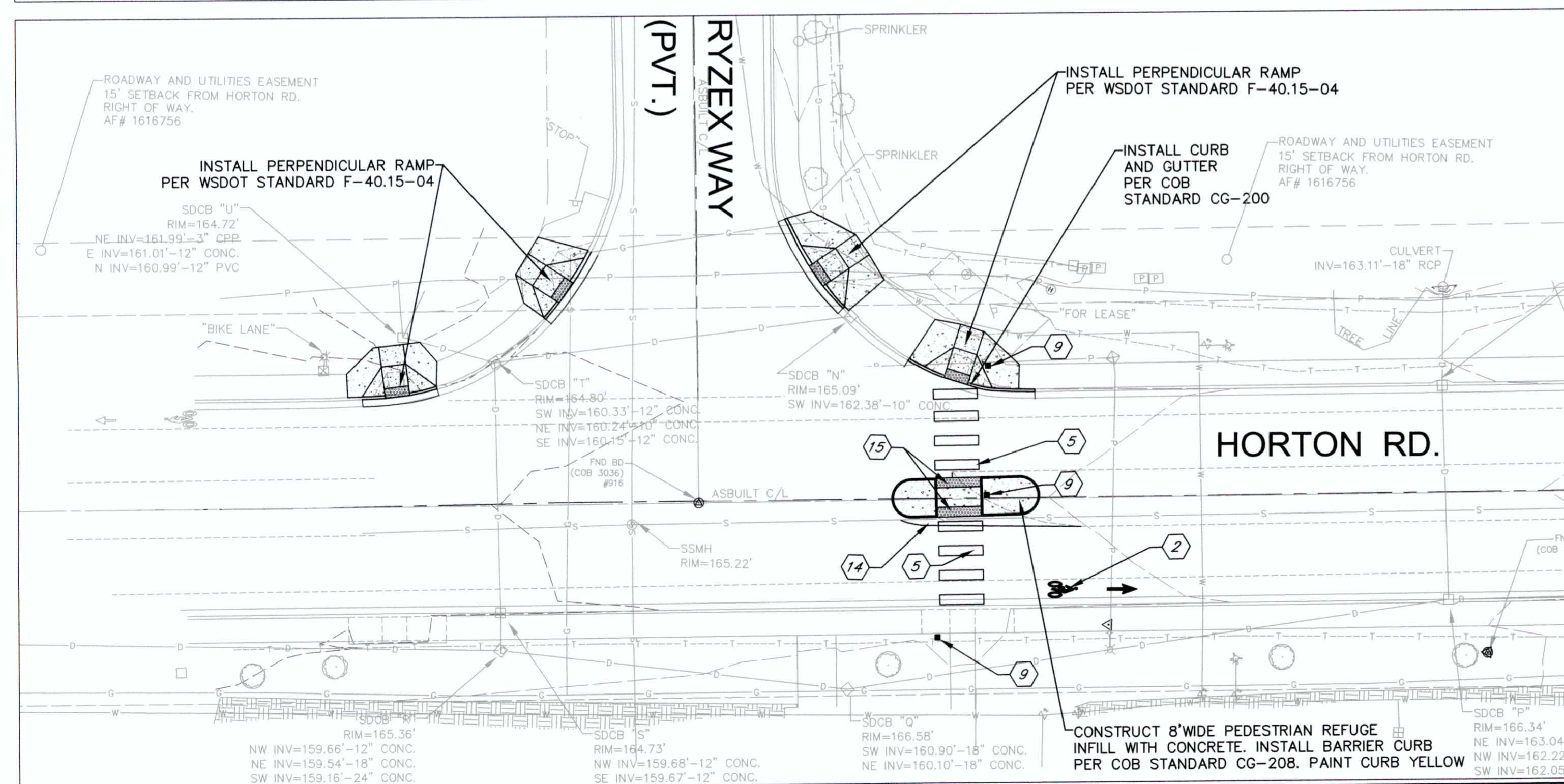
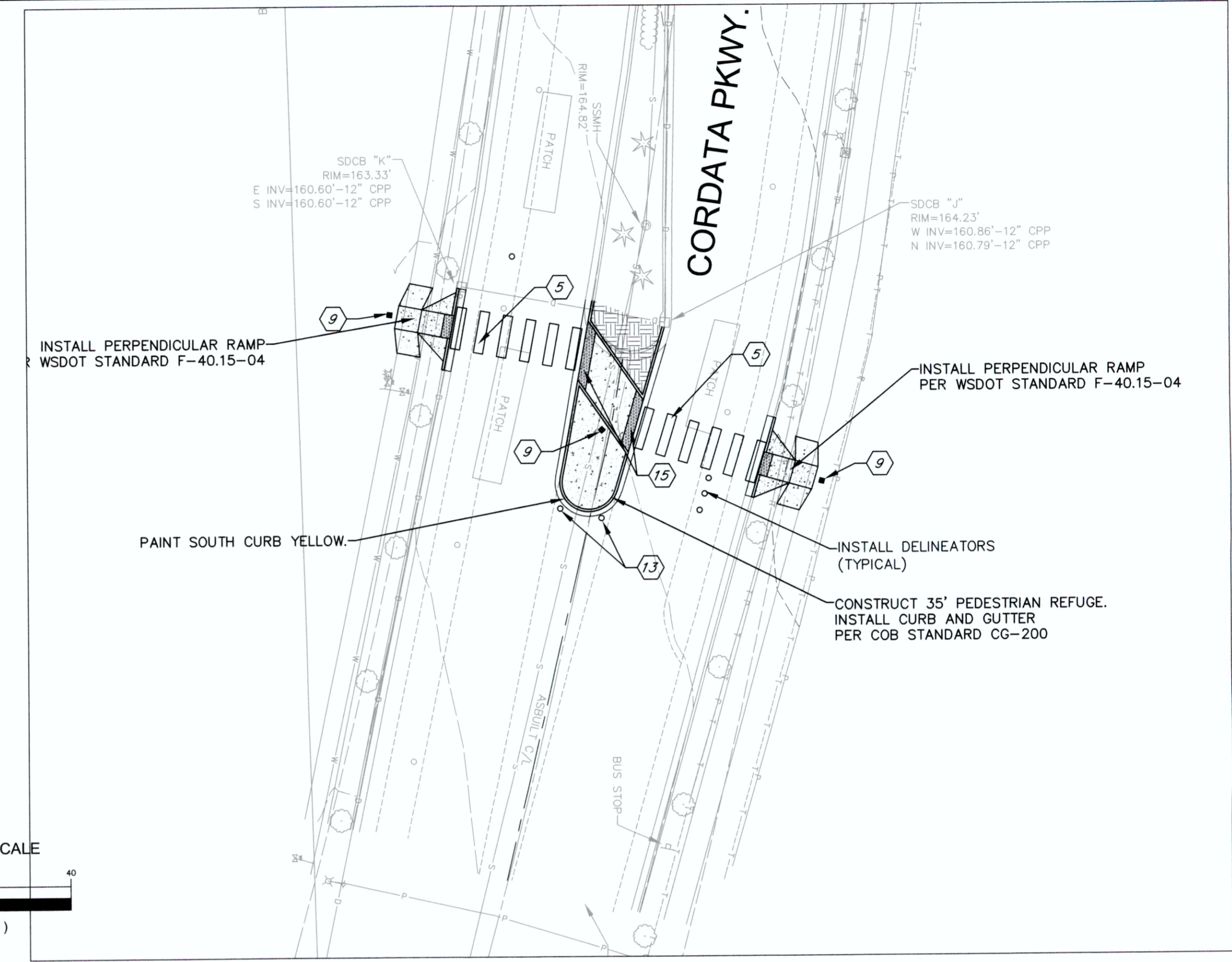
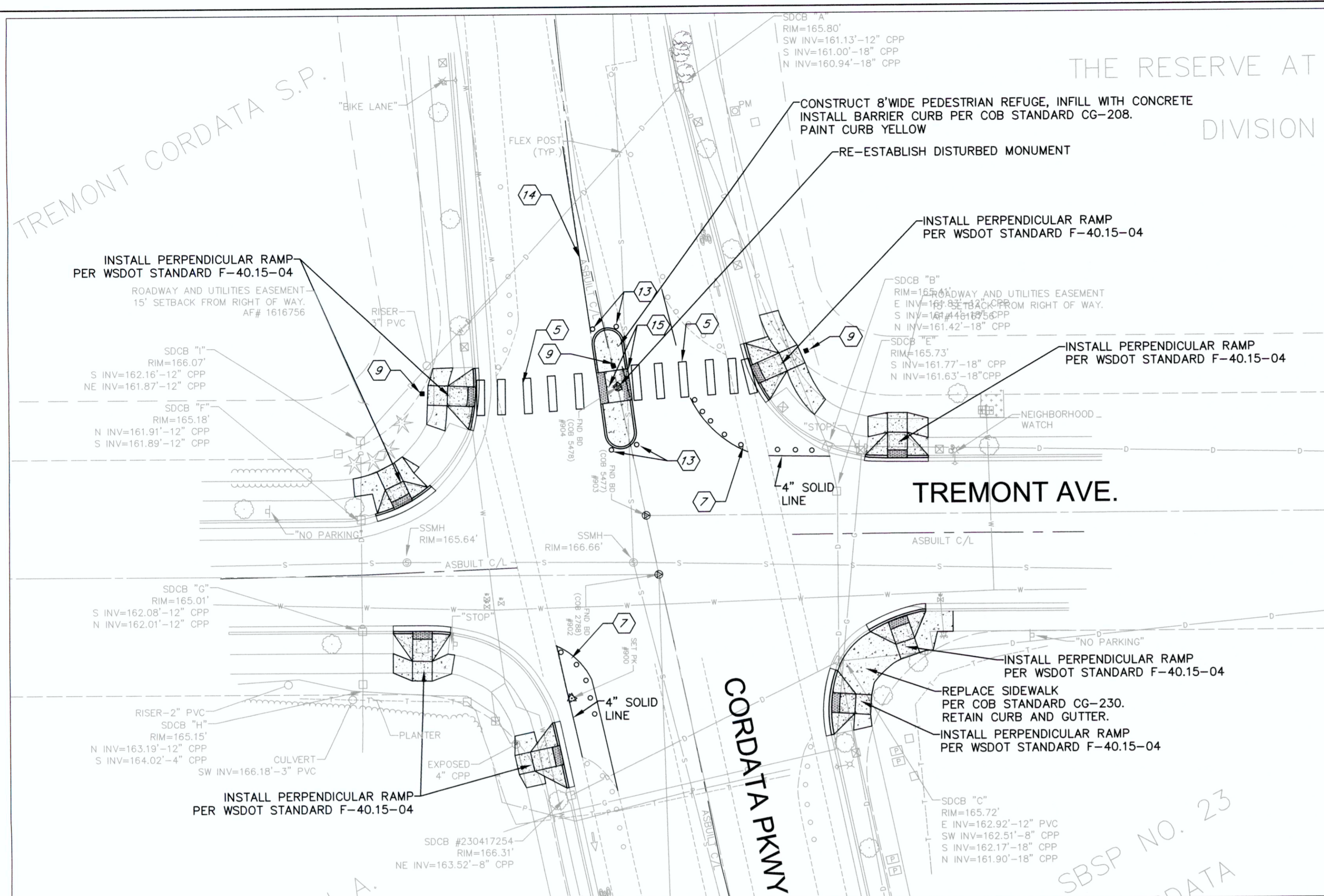
**SCALE**  
 Horiz. 1"=20'  
 Vert. 1"=NA

**DATUM**  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS  
 CHANNELIZATION WHARF ST.**

SHEET 34 OF 45



**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
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- 8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
- 9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
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- 12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



No	Revision	By
4		
3		
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PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

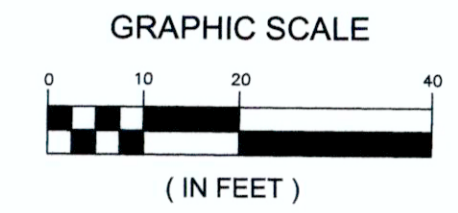
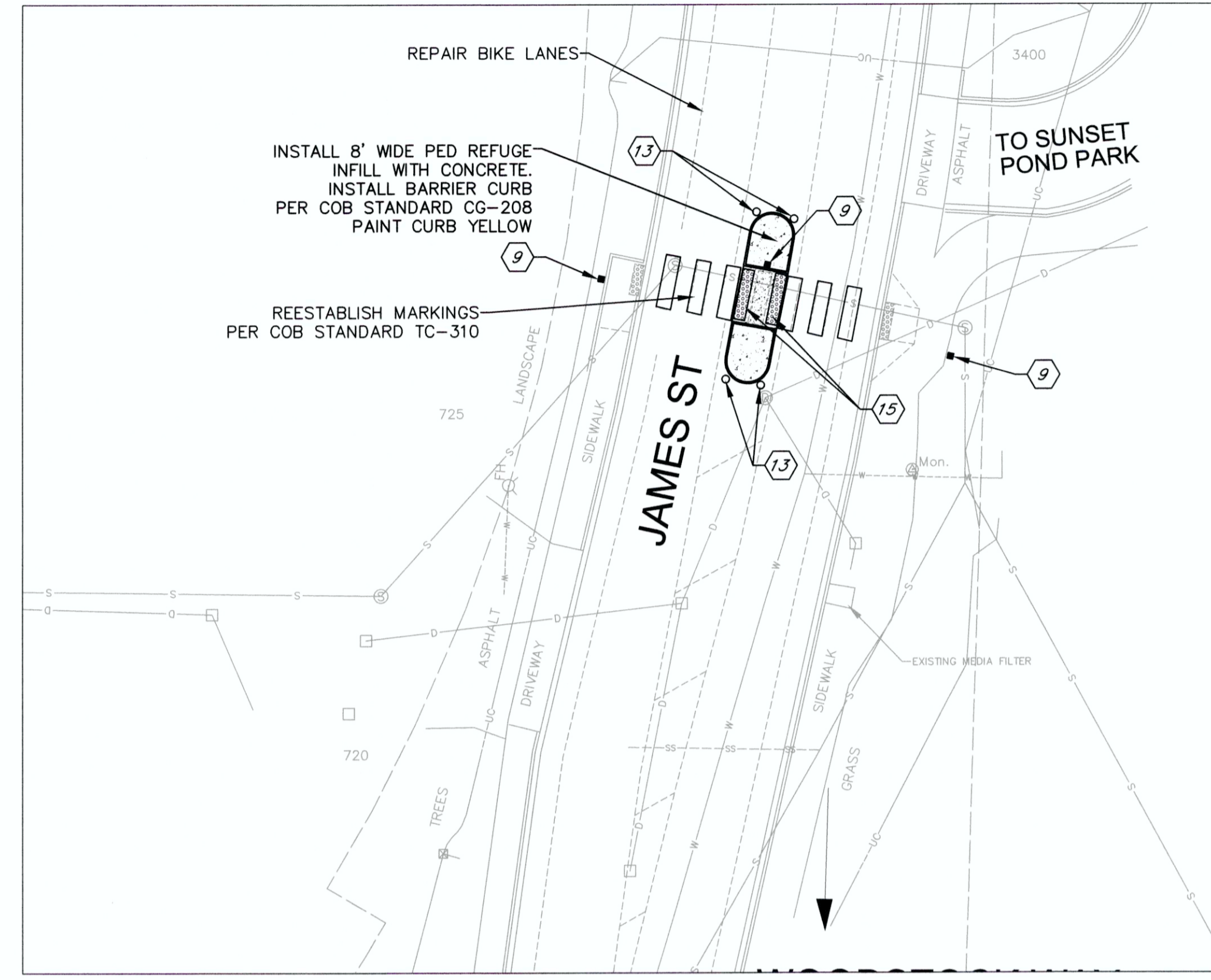
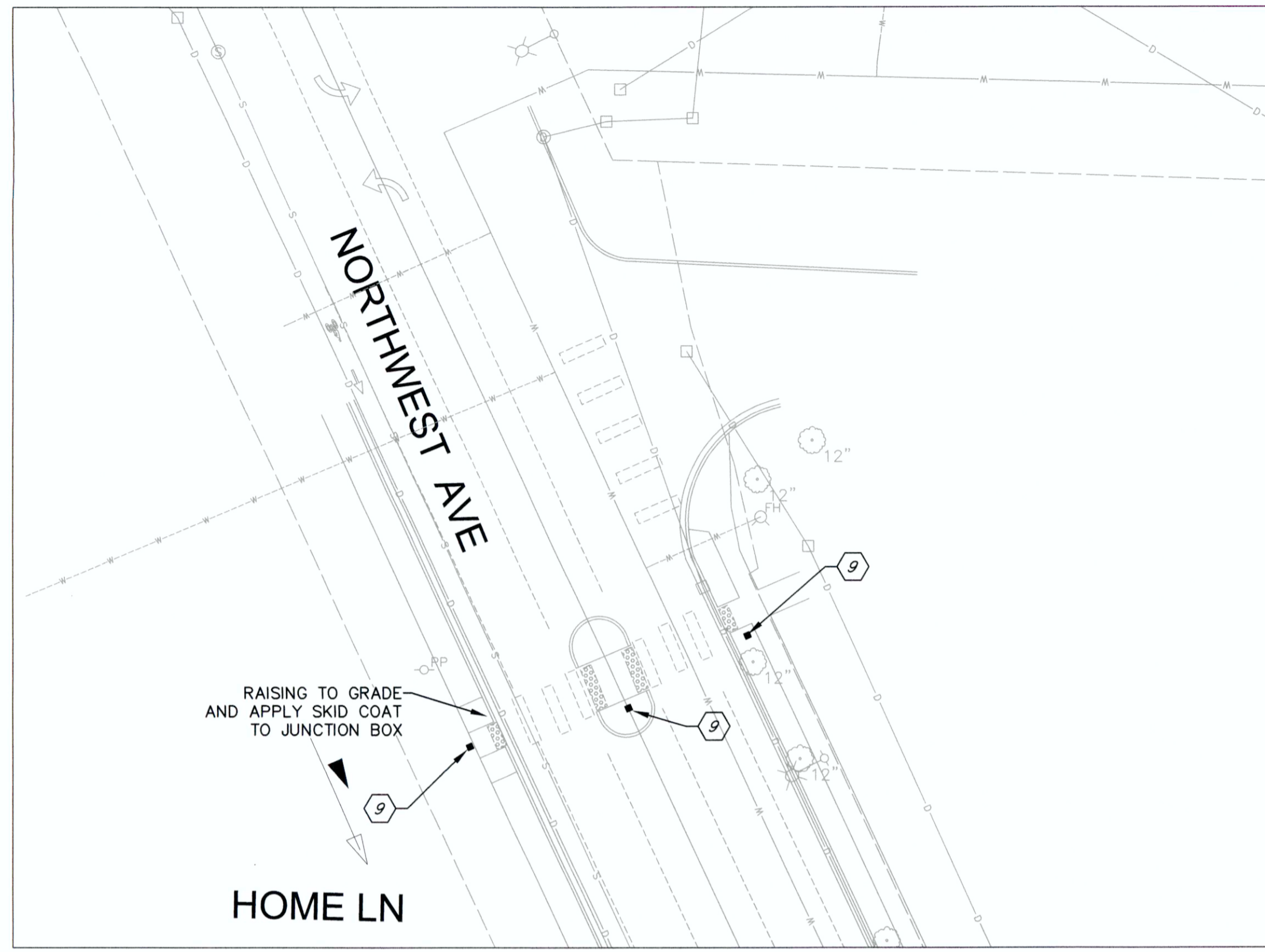
SCALE  
 Horiz. 1"=20'  
 Vert. 1"=NA

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

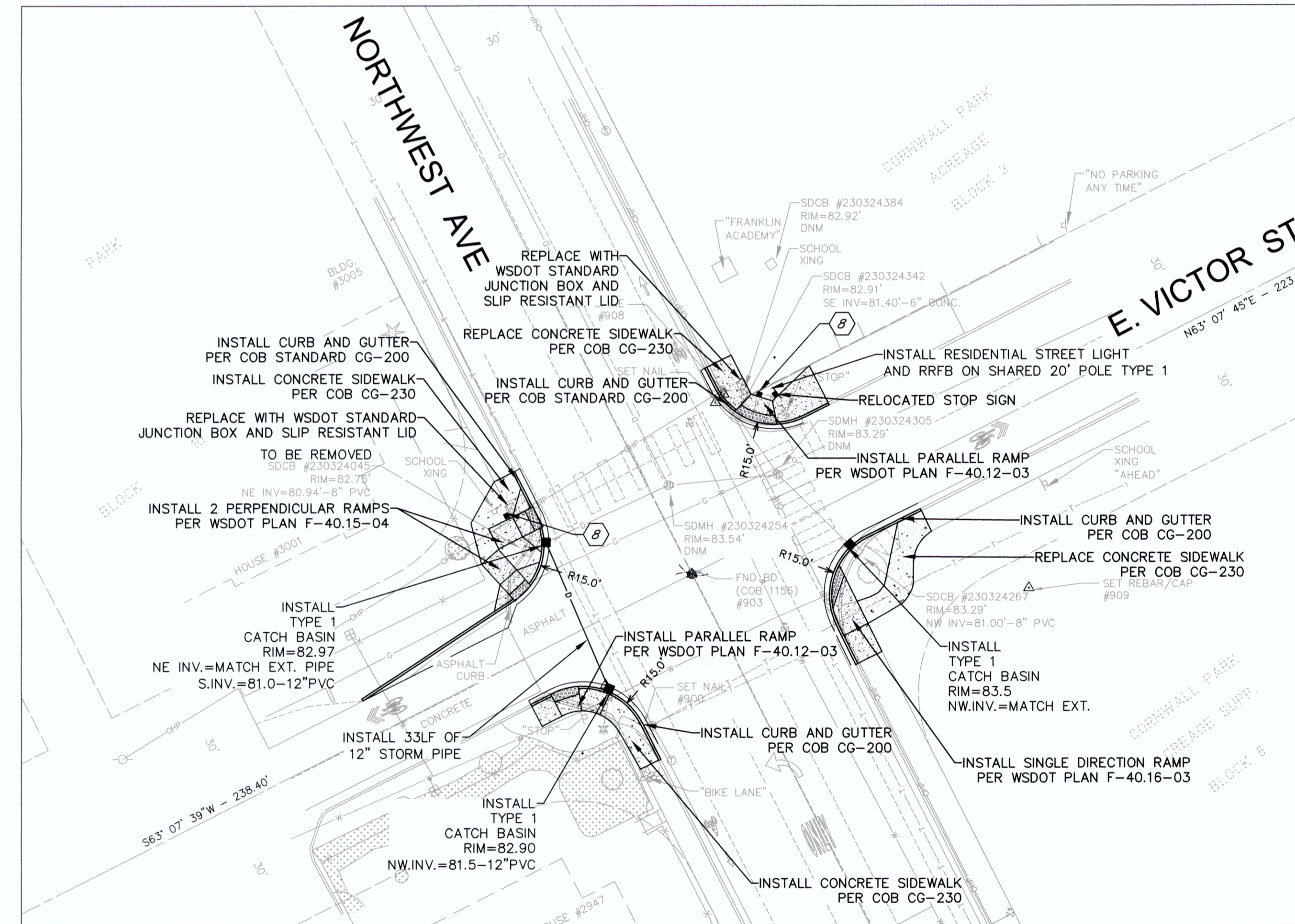
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 CHANNELIZATION & RRFB INTERSECTIONS 1, 2, 3

SHEET 35 OF 45



**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
- 5 INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
- 6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
- 7 BUFFER TRANSITION PER DETAIL SHEET 39
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- 13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
- 14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
- 15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
- 16 NOT USED THIS SHEET
- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



4			
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1			
Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

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

DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

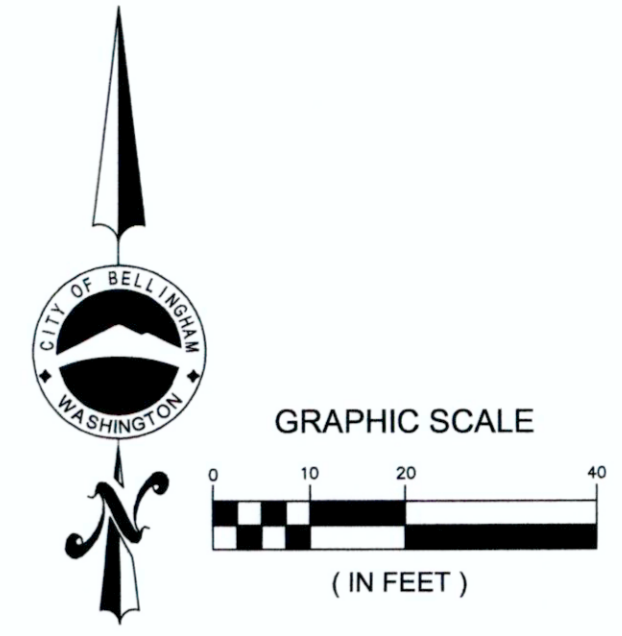
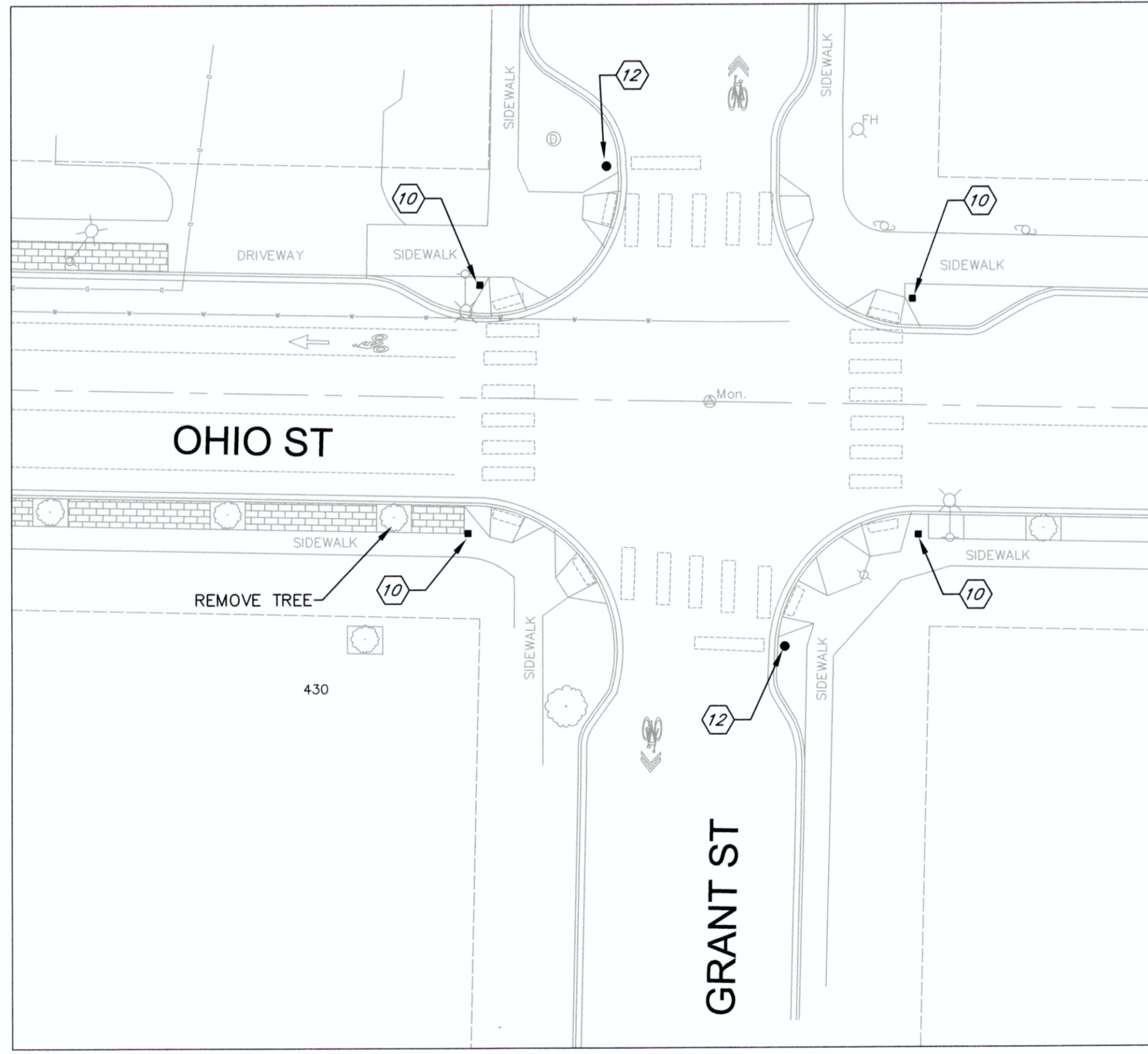
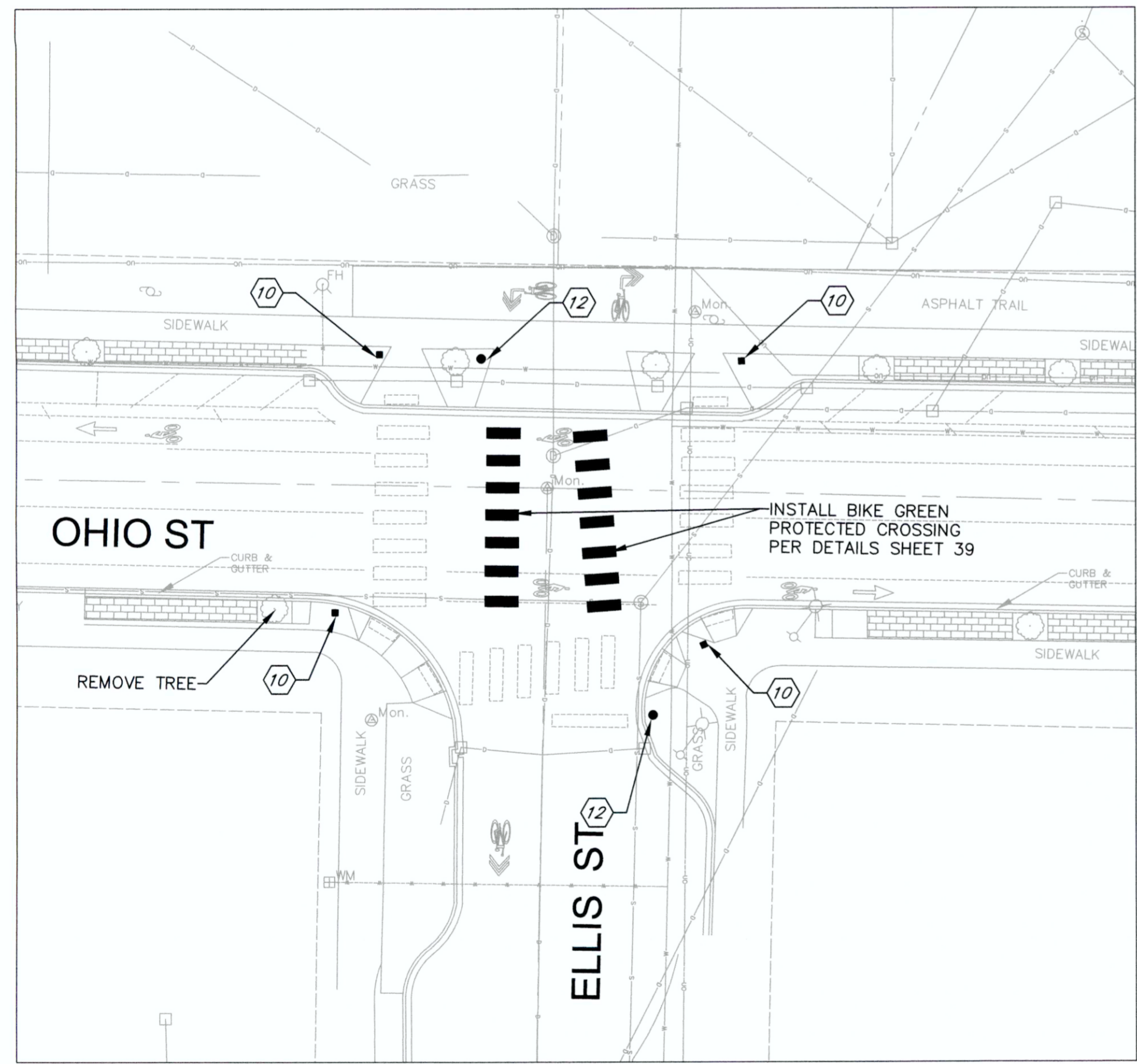
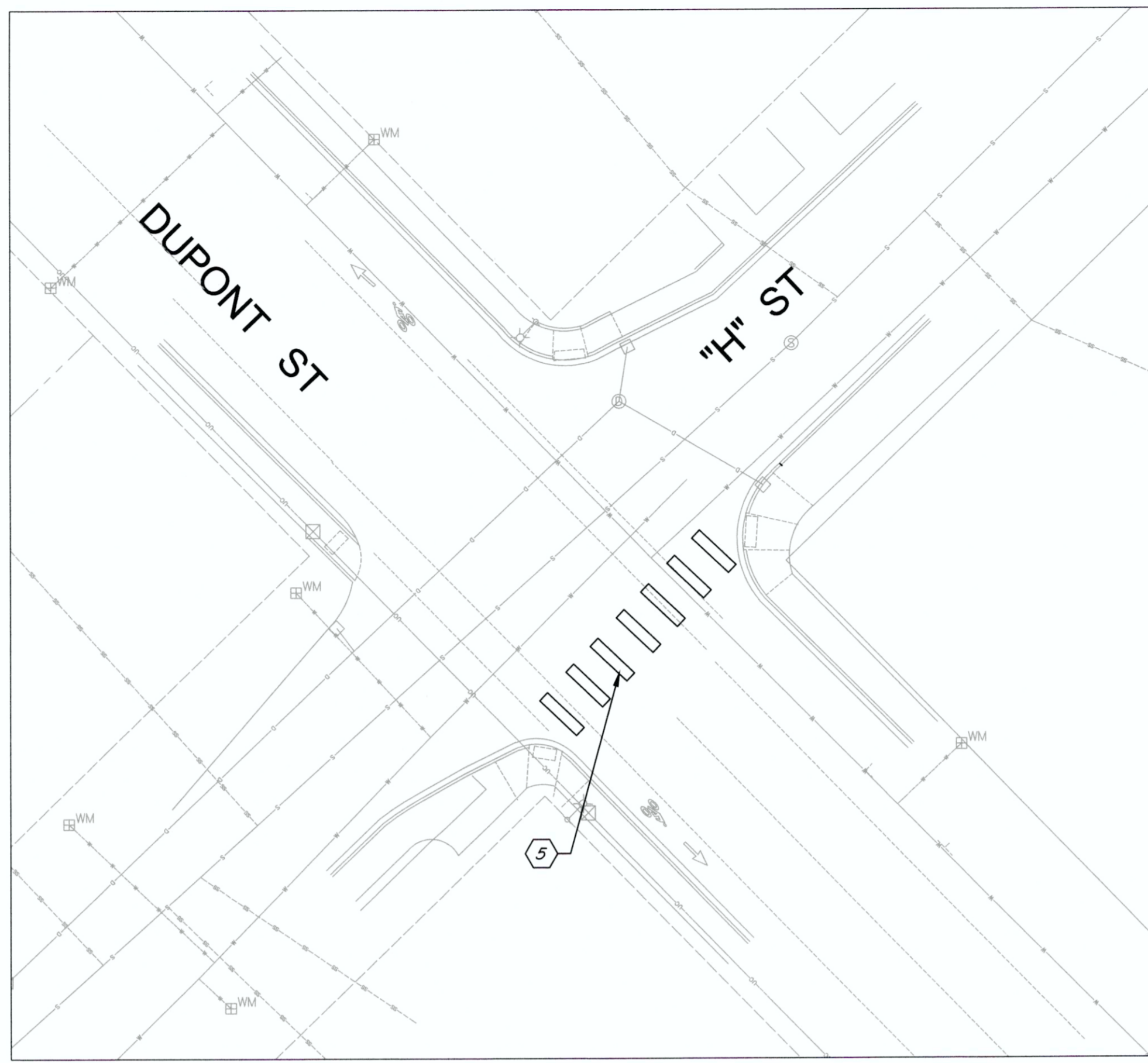
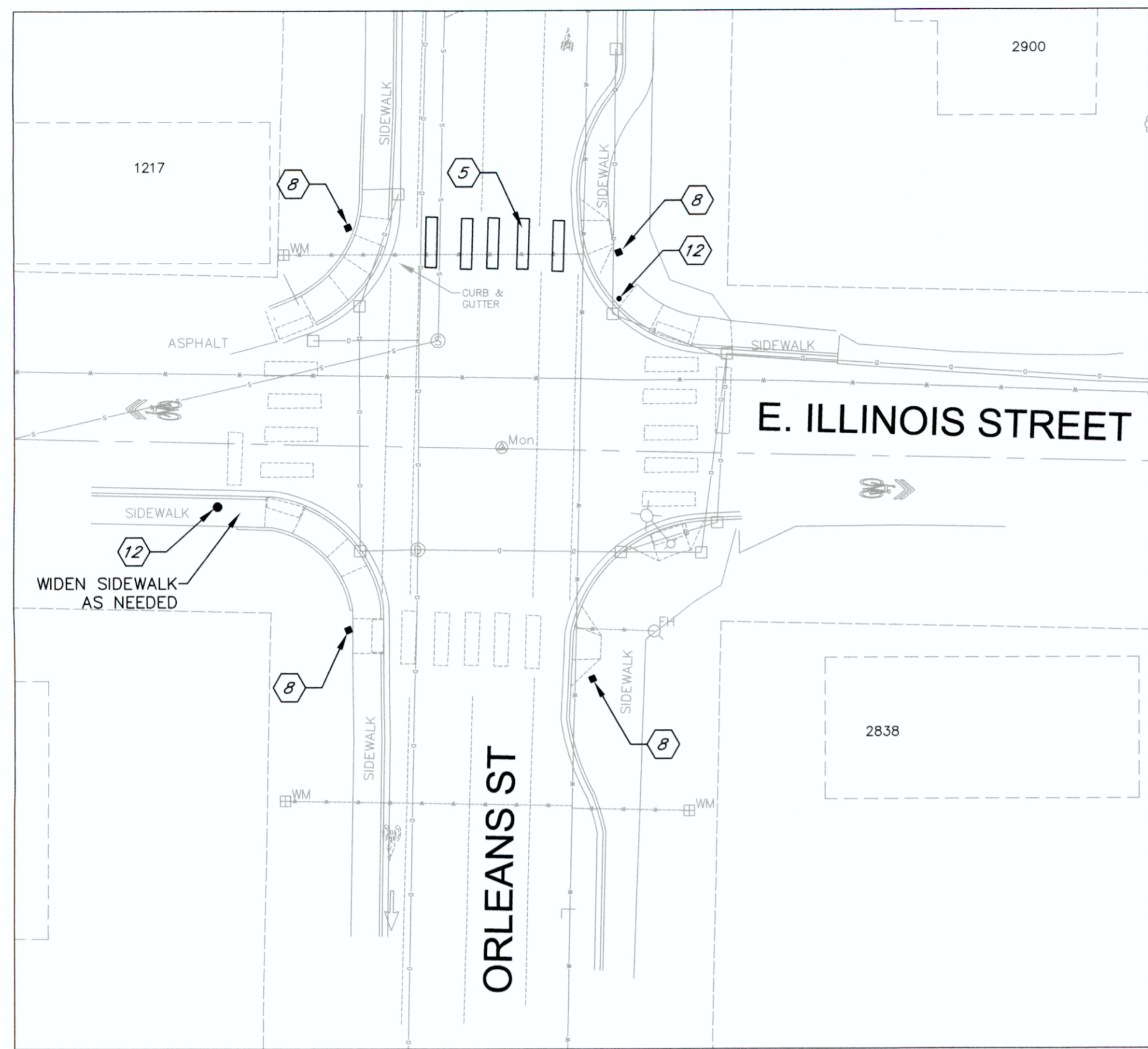
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 CHANELIZATION & RRFB 4, 5, & 6

SHEET 36 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-2723



24 May 2023



**CONSTRUCTION NOTES:**

- 1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
- 2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
- 3 BIKE LANE STRIPING PER CITY STANDARD TC-315
- 4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
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- 17 INSTALL 6" PLASTIC LANE LINE.
- 18 NOT USED THIS SHEET
- 19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



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Date	No	Revision	By

PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

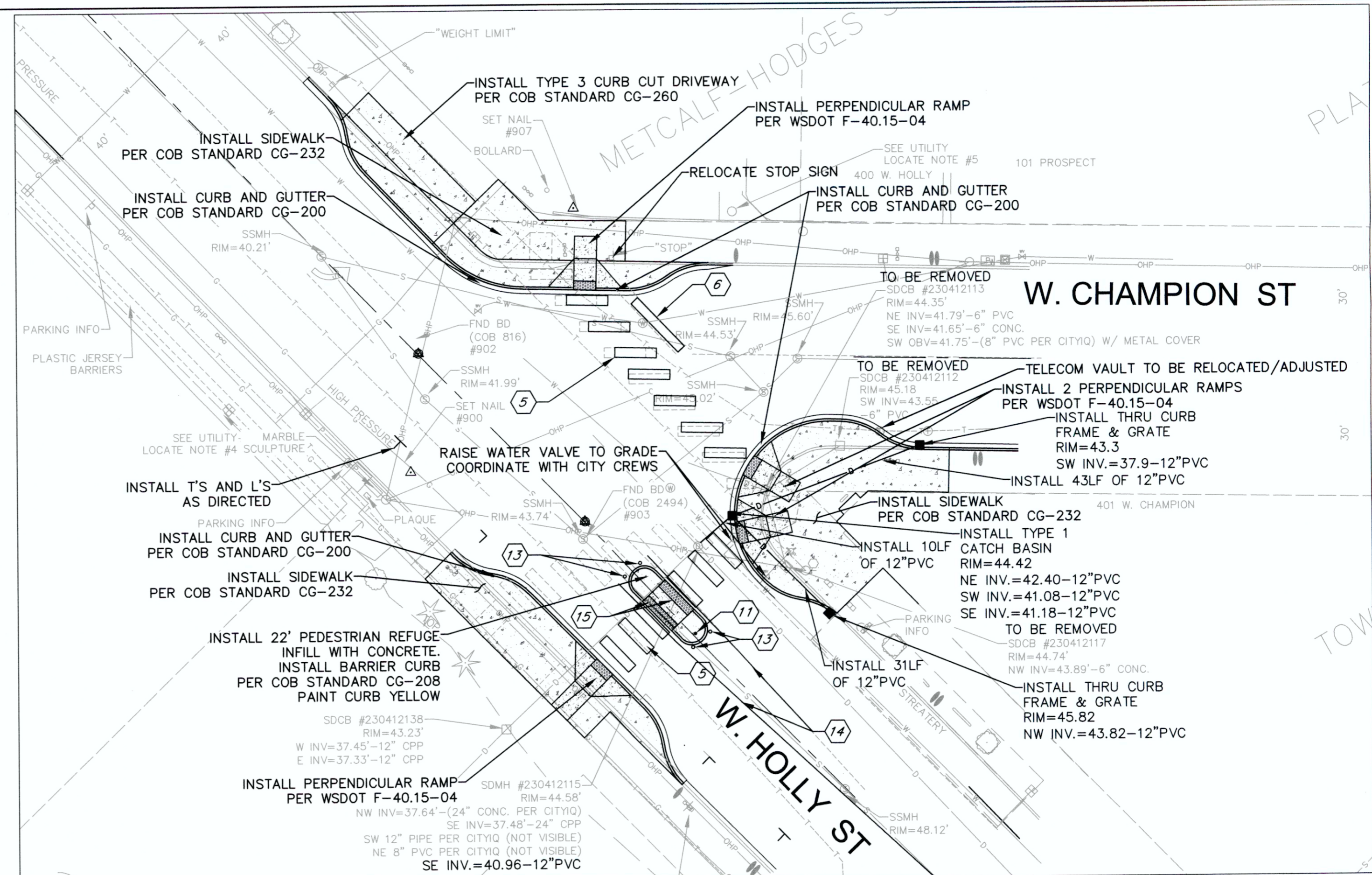
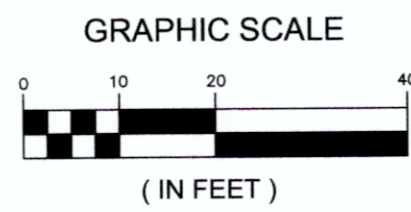
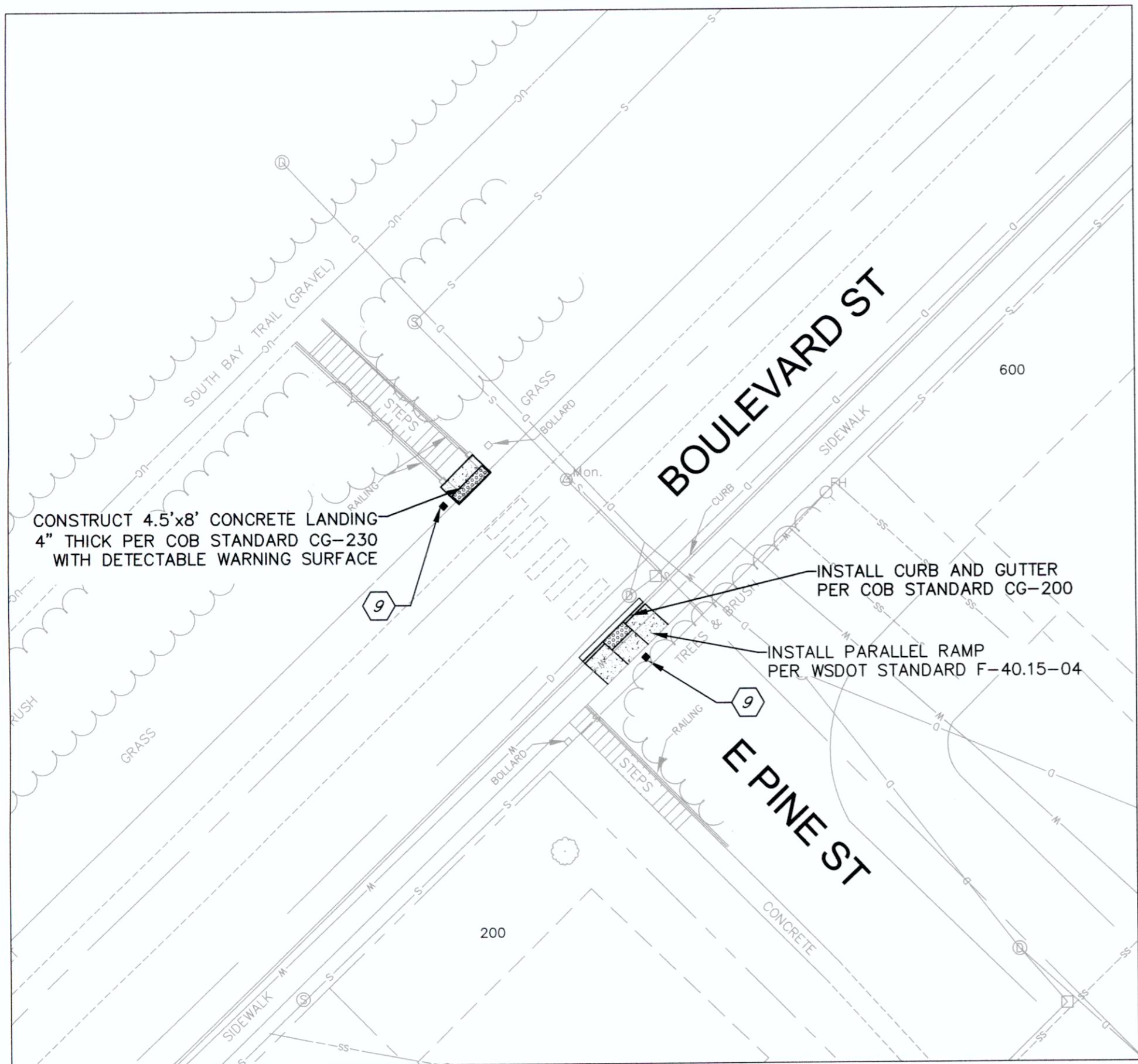
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DATUM  
 NAD 83/98  
 NAVD 88

Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

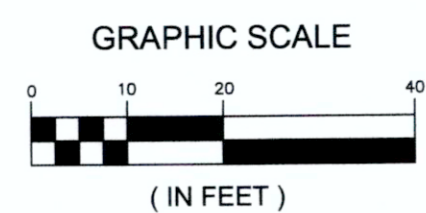
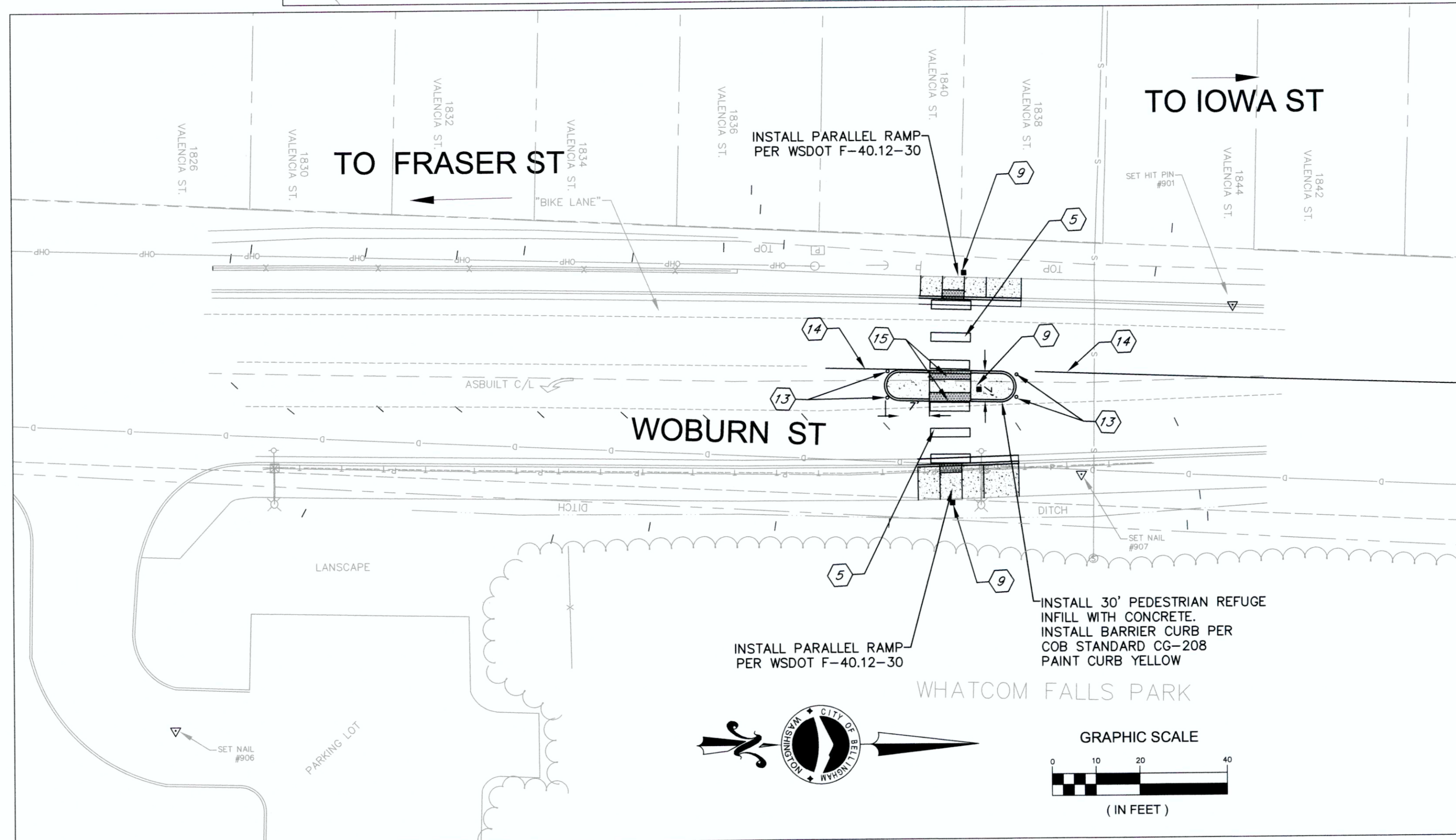
**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 CHANELIZATION & RRFB 7, 8, 11, & 12

SHEET 37 OF 45



**CONSTRUCTION NOTES:**

- |   |   |
|---|---|
| <p>1 INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER</p> <p>2 INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315</p> <p>3 BIKE LANE STRIPING PER CITY STANDARD TC-315</p> <p>4 INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39</p> <p>5 INSTALL 2'x9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10</p> <p>6 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.</p> <p>7 BUFFER TRANSITION PER DETAIL SHEET 39</p> <p>8 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.</p> <p>9 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.</p> <p>10 INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.</p> <p>11 INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.</p> | <p>12 INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.</p> <p>13 INSTALL SHORT FLEXIBLE YELLOW DELINEATOR</p> <p>14 INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305</p> <p>15 INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03</p> <p>16 NOT USED THIS SHEET</p> <p>17 INSTALL 6" PLASTIC LANE LINE.</p> <p>18 NOT USED THIS SHEET</p> <p>19 DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10</p> |
|---|---|



Date	No	Revision	By
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PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.A.M.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

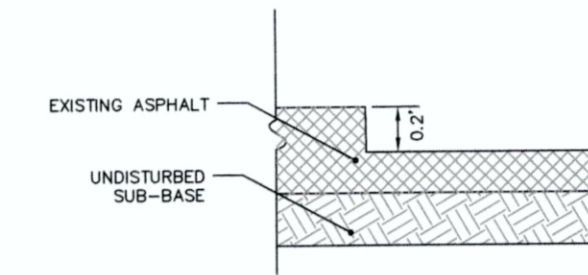
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DATUM  
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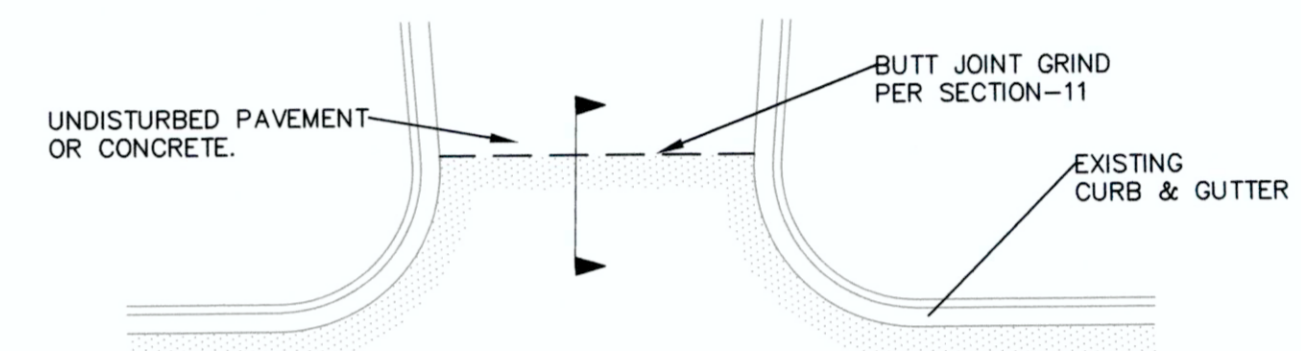
Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB 1068-2

**WEST SIDE NON-MOTORIZED IMPROVEMENTS**  
 CHANNELIZATION & RRFB INTERSECTIONS 9, 10, & 13

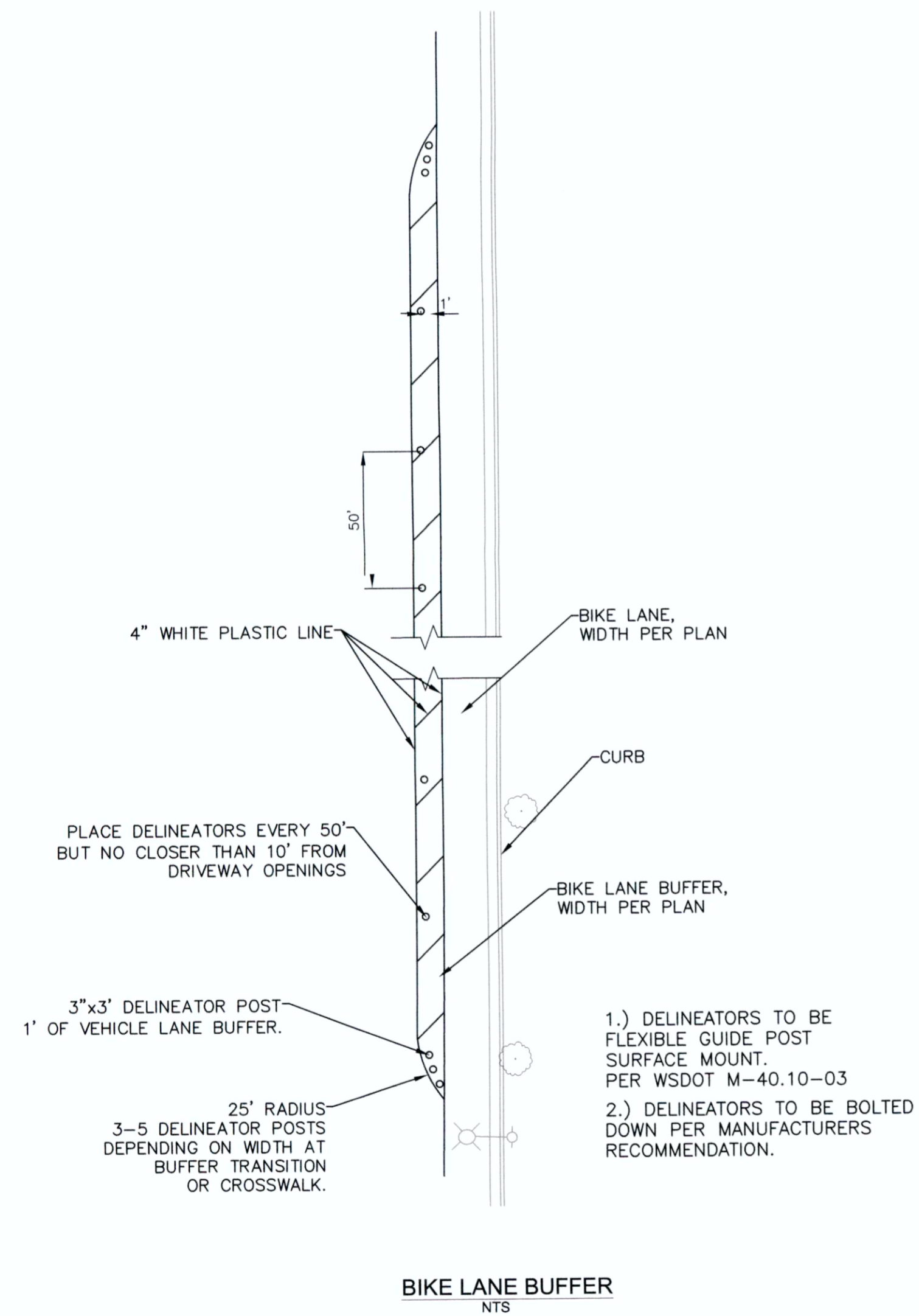
SHEET 38 OF 45



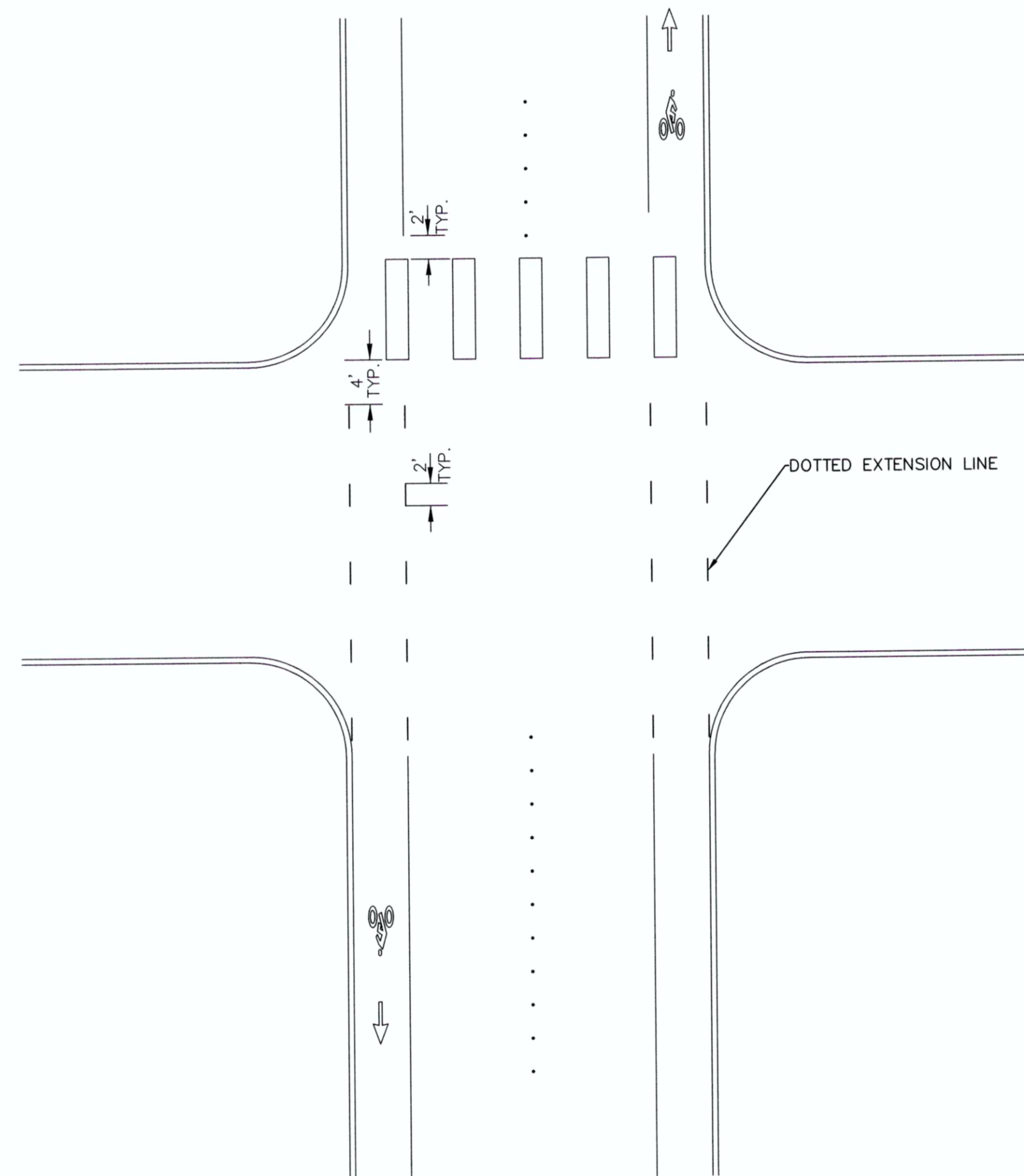
**BUTT JOINT FOR OVERLAY GRINDING**  
NTS



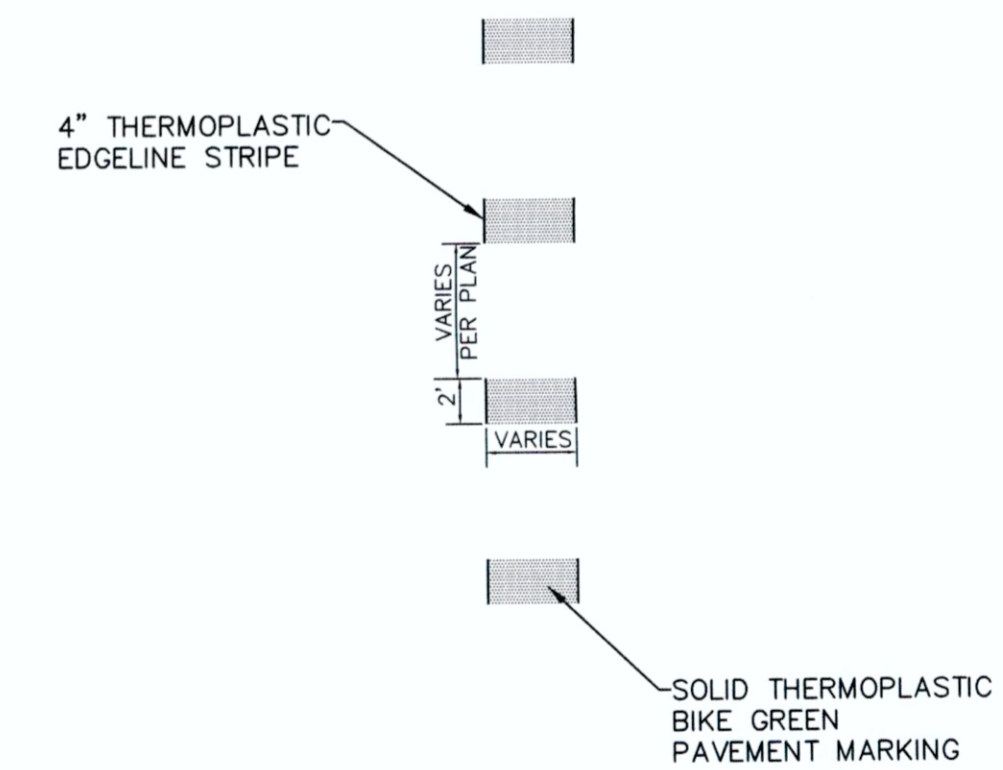
**TYPICAL BUTT JOINT GRIND AT INTERSECTION**  
NTS



**BIKE LANE BUFFER**  
NTS



**TYPICAL BIKE LANE EXTENSIONS DETAIL - AT CROSSWALK**  
NTS



**PROTECTED BIKE STREET CROSSING**  
NTS



24 May 2023

Date	No	Revision	By
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PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

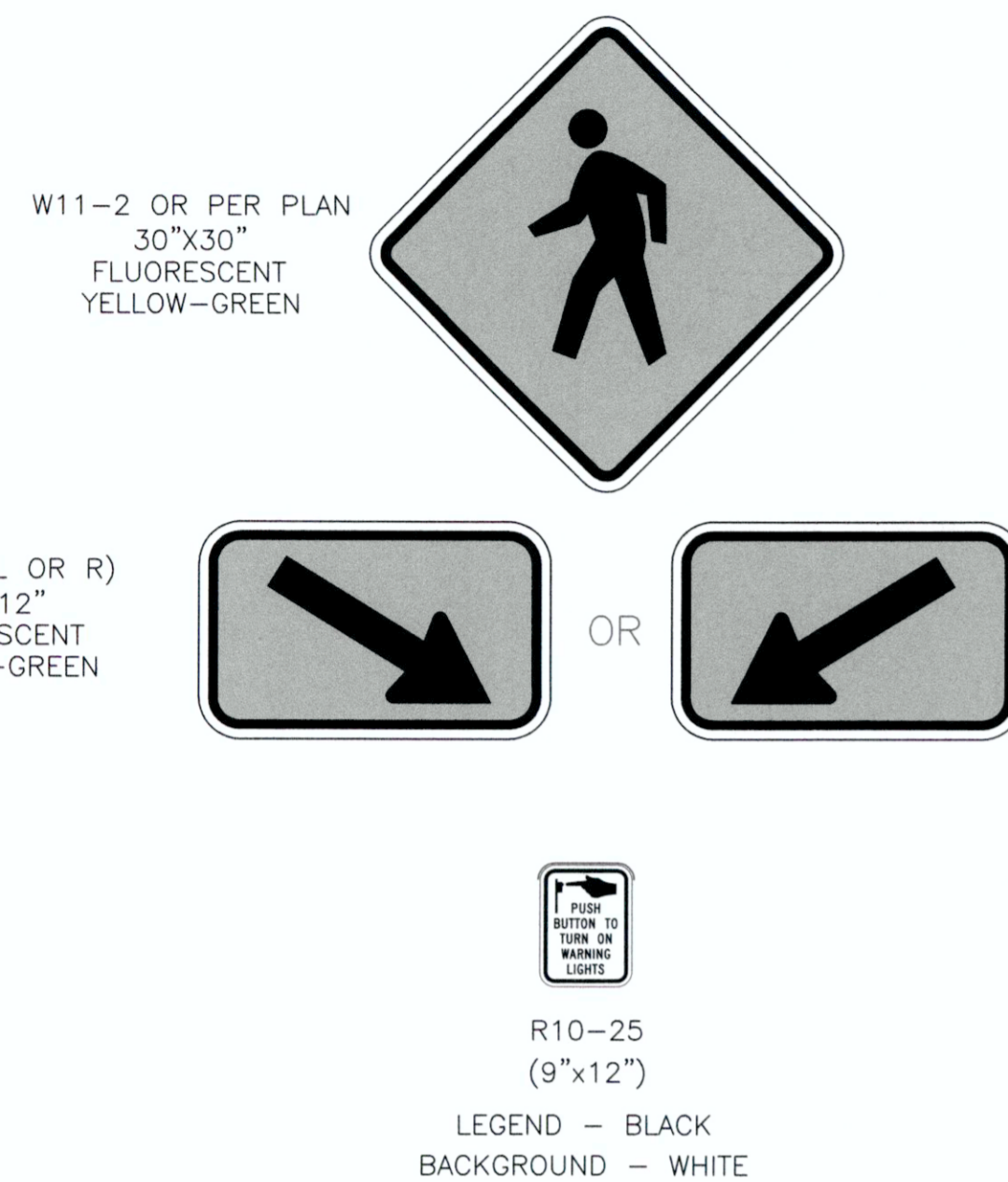
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**DATUM**  
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Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB

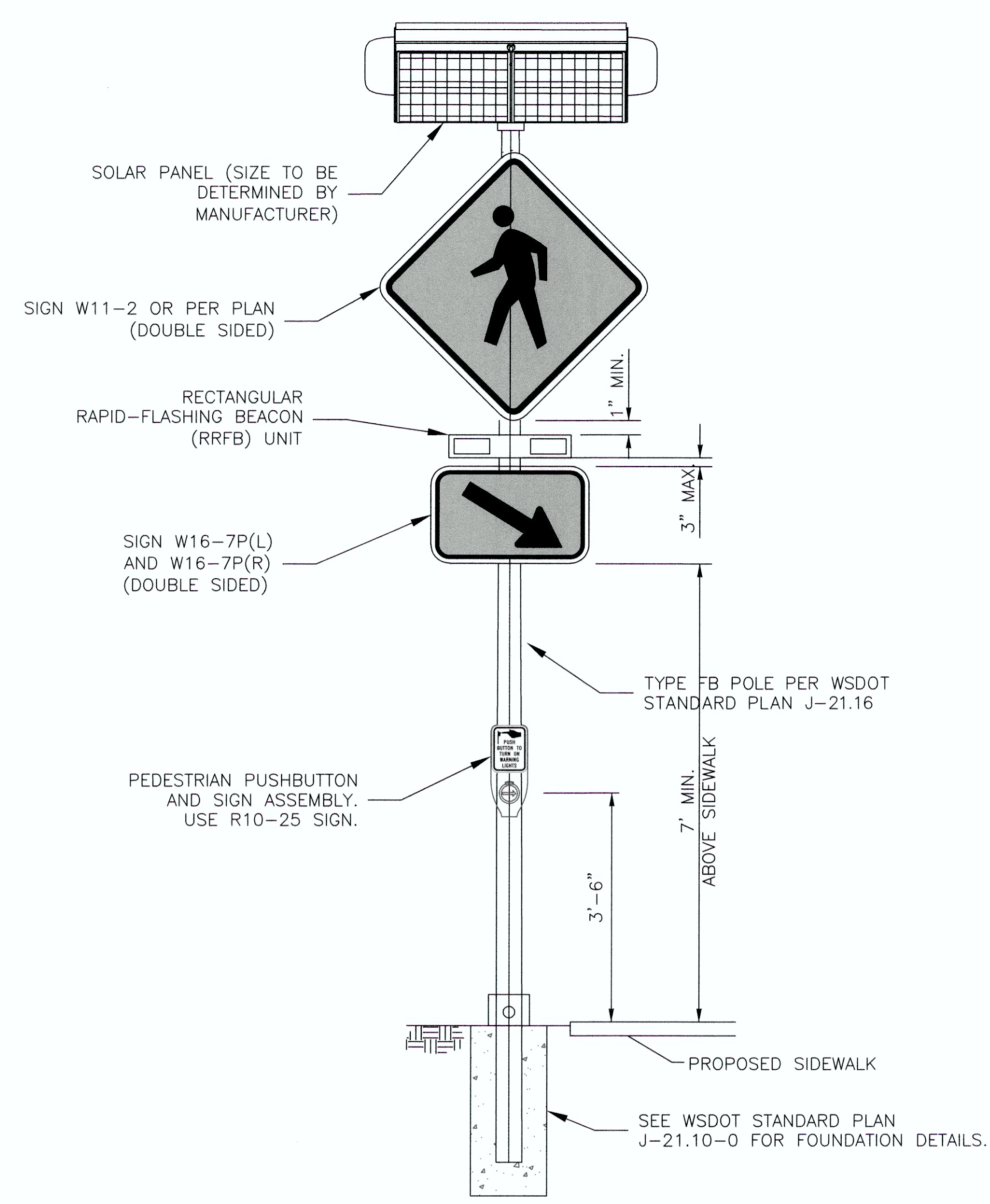
**WESTSIDE NON MOTORIZED IMPROVEMENTS**  
**CHANNELIZATION AND PAVING DETAILS**

SHEET 39 OF 45

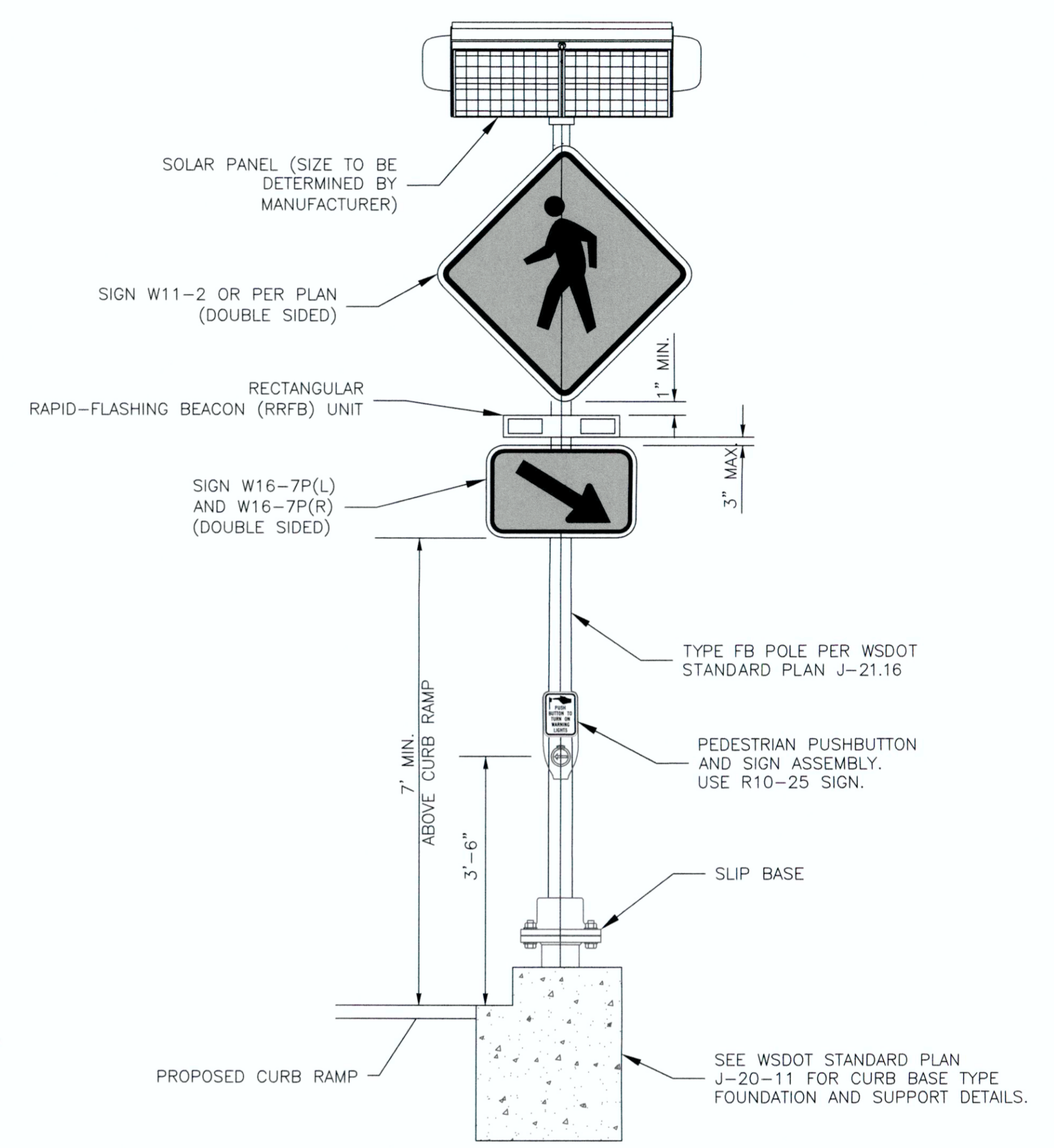


**RRFB DETAIL NOTES:**

- RRFB SIGNS, AS SHOWN ON THIS DETAIL AND THE PLANS, SHALL BE PROVIDED BY THE CONTRACTOR.
- ALL OTHER GROUND-MOUNTED SMALL SIGNS SHALL BE PROVIDED BY THE CITY OF BELLINGHAM.
- ORIENT SOLAR PANEL PER MANUFACTURER'S RECOMMENDATION.
- TREE TRIMMING MAY BE REQUIRED FOR OPTIMAL SOLAR PANEL PLACEMENT.
- PEDESTRIAN PUSHBUTTONS SHALL BE PLACED WITHIN IN 9 INCH REACH FROM CURB RAMP LANDING AREAS, PER ADA ACCESSIBILITY GUIDELINES. THOSE INTENDED FOR BICYCLE USE SHALL BE PLACED 18 INCH REACH FROM FACE OF CURB.
- THE CONTRACTOR SHALL VERIFY FOUNDATION LOCATIONS ARE FREE OF UTILITY CONFLICTS.
- WHERE PEDESTRIAN REFUGE PRESENT, INSTALL DOUBLE SIDED RRFB ON REFUGE AND SINGLE SIDED ON EACH SIDE OF THE STREET.
- ANY PUSHBUTTON SHALL ACTIVATE ALL RRFB'S IN AN INTERSECTION WHEN DUAL CROSSINGS ARE PROVIDED.
- FINAL SIGN/BUTTON LOCATION WILL BE FIELD VERIFIED TO MEET NECESSARY SIGHT DISTANCE AND ACCESIBILITY



**TYPICAL INSTALLATION**



**CURB BASE TYPE INSTALLATION**

**RECTANGULAR RAPID FLASHING BEACON (RRFB) AND SIGN DETAIL**

N.T.S.



24 May 2023

4		PROJECT ENGINEER	JJB	DIRECTOR OF PUBLIC WORKS	E.C.J.	CITY OF BELLINGHAM, WASHINGTON PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SCALE	DATUM	Job. No.	ES-0563	WESTSIDE NON MOTORIZED IMPROVEMENTS RRFB DETAILS	SHEET	40	OF	45
3		DESIGNED/DRAWN	ELH	CITY ENGINEER	C.M.A.S.		Horiz.	1"=20'	NAD 83/98	Date		02/2023			
2		INSPECTOR	?	OPERATIONS ENGINEER	M.A.O.		Vert.	1"=NA	NAVD 88	Field Bk.		FB			
1															
Date	No	Revision	By	CONTACT PERSON: JESSICA BENNETT, P.E.		PROJECT ENGINEER AT 778-7923									



**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 MAY BE MADE BY INSERTING MIN. 3/8" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EGGED.
- ALL RADII LESS THAN 100' SHALL USE FLEXIBLE WOOD OR METAL FORMS TO ELIMINATE ANGULAR POINTS AT 10' SECTION POINTS.
- 2" PVC 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 <i>[Signature]</i> City Engineer	CITY OF BELLINGHAM TYPE 'A' MODIFIED CURB AND GUTTER	DRAWING CG-200
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**JOINTS:**  
JOINTS SHALL BE PLACED AT 10' INTERVALS. JOINTS SHALL BE CUT VERTICALLY AND TO A DEPTH OF 5 INCHES.

HORIZONTAL BARS WILL BE #4 DEFORMED BARS IN ALL TANGENT AREAS

#4 VERTICAL DEFORMED BARS AT 18" C/C. (DESIGN A-15)

APPROVED <i>[Signature]</i> City Engineer	11/29/04 Date	CITY OF BELLINGHAM EXTRUDED CEMENT CONCRETE CURB	DRAWING CG-212
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1. EXISTING P.C.C PAVEMENT  
VERTICAL SAWCUT NOT IN VEHICLE WHEEL PATH. EXTEND TO FOGLINE FOR BIKE LANES

2. EXISTING ASPHALT CONCRETE PAVEMENT  
A. PATCH WIDTH 3' OR GREATER  
B. PATCH WIDTH 18" TO 36"

**NOTES:**  
ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF BELLINGHAM'S STANDARD SPECIFICATIONS FOR UTILITY CUTS IN STREET AREA.  
FOR ASPHALT CONCRETE PAVEMENT, TACK ALL EDGES AND HMA BASE SURFACE BEFORE PLACING HMA PAVEMENT. SEAL ALL JOINTS WITH HOT ASPHALT (AR-4000W) BETWEEN EXISTING AND NEW HMA PAVEMENT IMMEDIATELY AFTER FINISH ROLLING.  
CONTRACTOR SHALL MATCH EXISTING SURFACES THAT ARE COLORED, TEXTURED, STAMPED OR INLAID WITH BRICK.

APPROVED <i>[Signature]</i> City Engineer	15 June 2016 Date	CITY OF BELLINGHAM PAVEMENT REPAIR (CURB REPLACEMENT)	DRAWING CG-218
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WHEEL CHAIR RAMPS TO BE LOCATED AT ALL RETURNS

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

3/4" DEEP V GROOVES.

ASPHALT RAMP AT END OF SIDEWALK

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

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

2" OF 3/4" WASHED ROCK

APPROVED <i>[Signature]</i> City Engineer	10/19/09 Date	CITY OF BELLINGHAM SIDEWALK	DRAWING CG-230
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**GENERAL NOTES:**  
FOR DRIVEWAYS 12"-16" WIDE PLACE 3/4" DEEP "V" GROOVE AT MID PT. FOR DRIVEWAYS 17"-30" WIDE, PLACE 3/4" DEEP "V" GROOVE AT 1/3 PTS.  
DRIVEWAY SECTIONS SHALL BE 6" THICK MINIMUM.  
DRIVEWAY SECTIONS AND RAMPS SHALL BE 6" MINIMUM CONCRETE CLASS "C".  
A 2" PVC SCHD 40 WEEP HOLE 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 BRUSH FINISHED (PARALLEL TO STREET) WITH FIBER BRUSH.  
FOR CURB CUTS THAT DO NOT HAVE AN ADJACENT SIDEWALK, THE CURB SHALL BE 0.5 FEET ABOVE THE CORRESPONDING LIP OF GUTTER. THE DRIVEWAY SHALL HAVE A MINIMUM 2% SLOPE TO THE GUTTER. THE CAPACITY OF THE GUTTER IS NOT COMPROMISED.  
ALL SLOPES ARE RELATIVE TO THE GUTTER FLOW LINE.

APPROVED <i>[Signature]</i> City Engineer	2/22/13 Date	CITY OF BELLINGHAM DRIVEWAY SECTIONS	DRAWING CG-260
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1. EXISTING P.C.C. PAVEMENT

2. EXISTING HMA OVERLAY/HMA BASE OR P.C.C.

3. EXISTING OIL MAT OR ASPHALT CONCRETE PAVEMENT

**NOTES:**  
ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF BELLINGHAM'S STANDARD SPECIFICATIONS FOR UTILITY CUTS IN STREET AREA.  
PAVEMENT OVERLAYS No. 2 AND 3, TACK ALL EDGES AND HMA BASE SURFACE BEFORE PLACING HMA PAVEMENT. SEAL ALL JOINTS WITH HOT ASPHALT (AR-4000W) BETWEEN EXISTING AND NEW HMA PAVEMENT IMMEDIATELY AFTER FINISH ROLLING.  
CONTRACTOR SHALL MATCH EXISTING SURFACES THAT ARE COLORED, TEXTURED, STAMPED OR INLAID WITH BRICK.

APPROVED <i>[Signature]</i> City Engineer	12/16/09 Date	CITY OF BELLINGHAM HORIZONTAL PAVEMENT REPAIR (STREET CROSSINGS)	DRAWING ST-180
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**BRASS DISK DETAIL**

REBAR 3/8" DIAMETER 10" 1" TO 3" OF CONCRETE COVER 3 PIECES MINIMUM

BRASS CAP 2" MINIMUM DIAMETER 3/4" MINIMUM DIAMETER SHANK 2 1/2" MINIMUM LENGTH SHANK

ASPHALT

CONCRETE SEE NOTE 2

SUBGRADE

GRAVEL BASE

18" MINIMUM DEPTH

**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 1/2" 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 <i>[Signature]</i> City Engineer	2/6 May 2017 Date	CITY OF BELLINGHAM CORE MONUMENT IN PAVEMENT NEW OR EXISTING	DRAWING ST-174
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Date	No	Revision

PROJECT ENGINEER	JJB
DESIGNED/DRAWN	ELH
INSPECTOR	?

DIRECTOR OF PUBLIC WORKS	E.C.J.
CITY ENGINEER	C.M.A.S.
OPERATIONS ENGINEER	M.A.O.

CITY OF BELLINGHAM, WASHINGTON  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

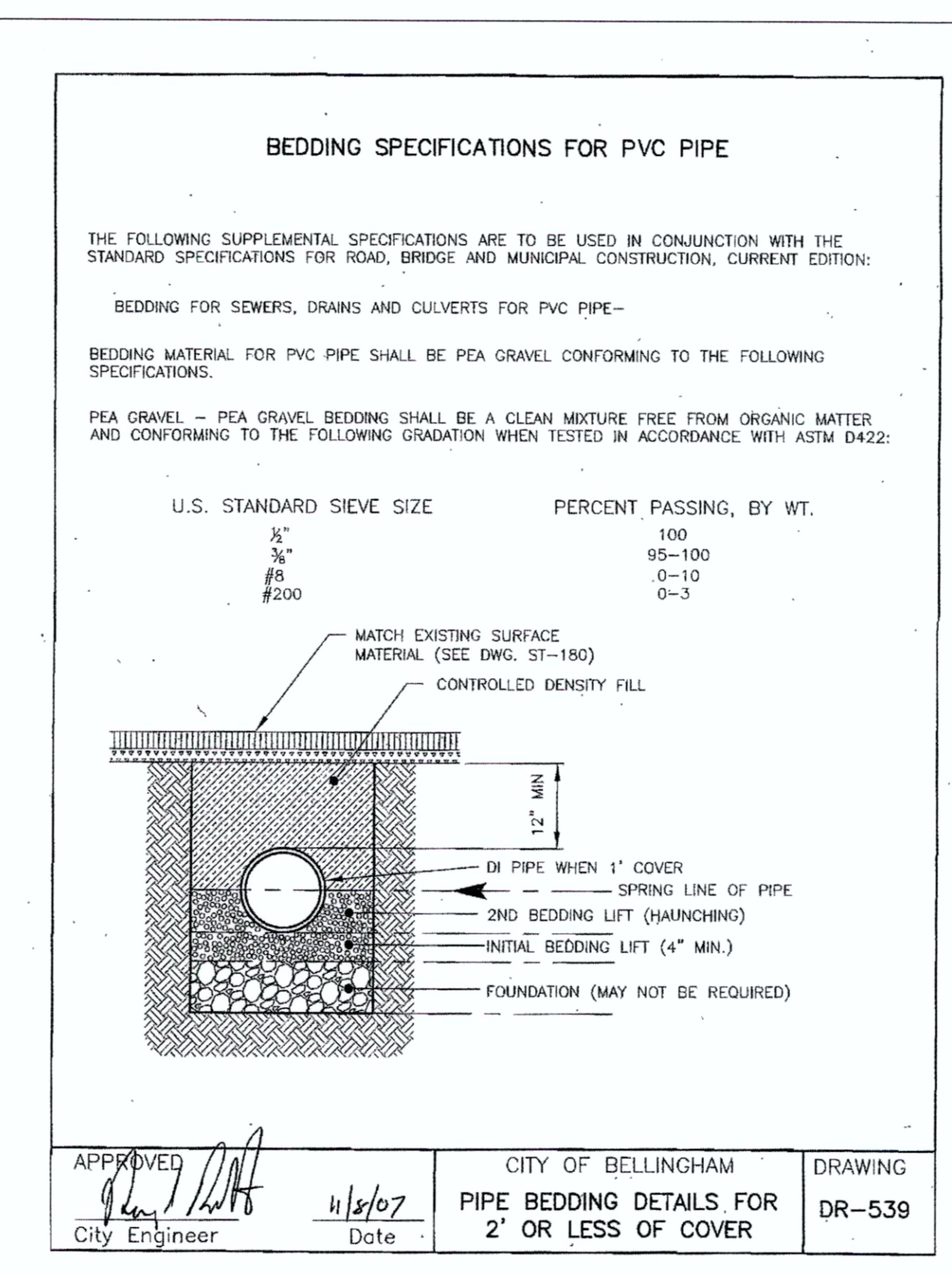
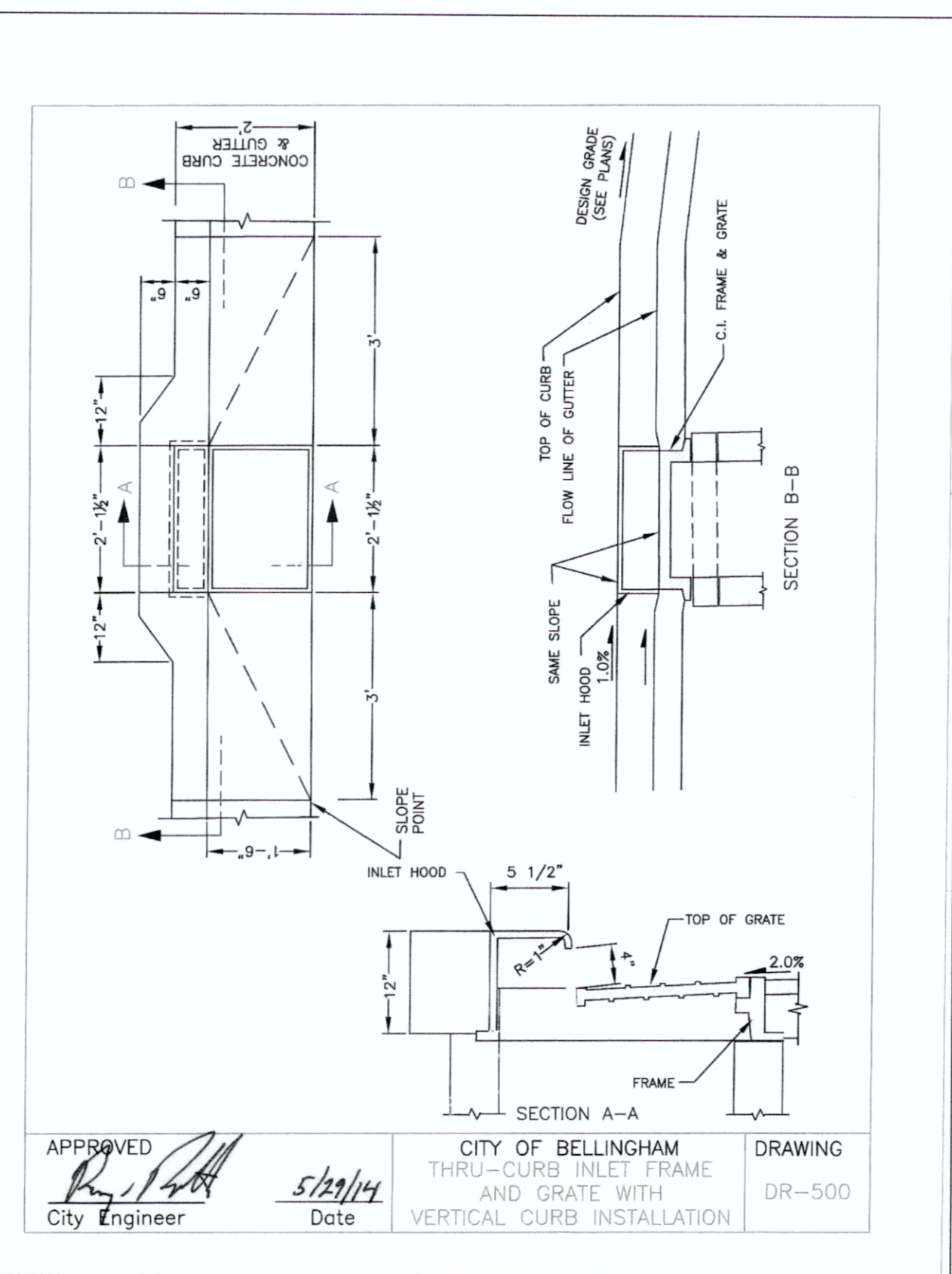
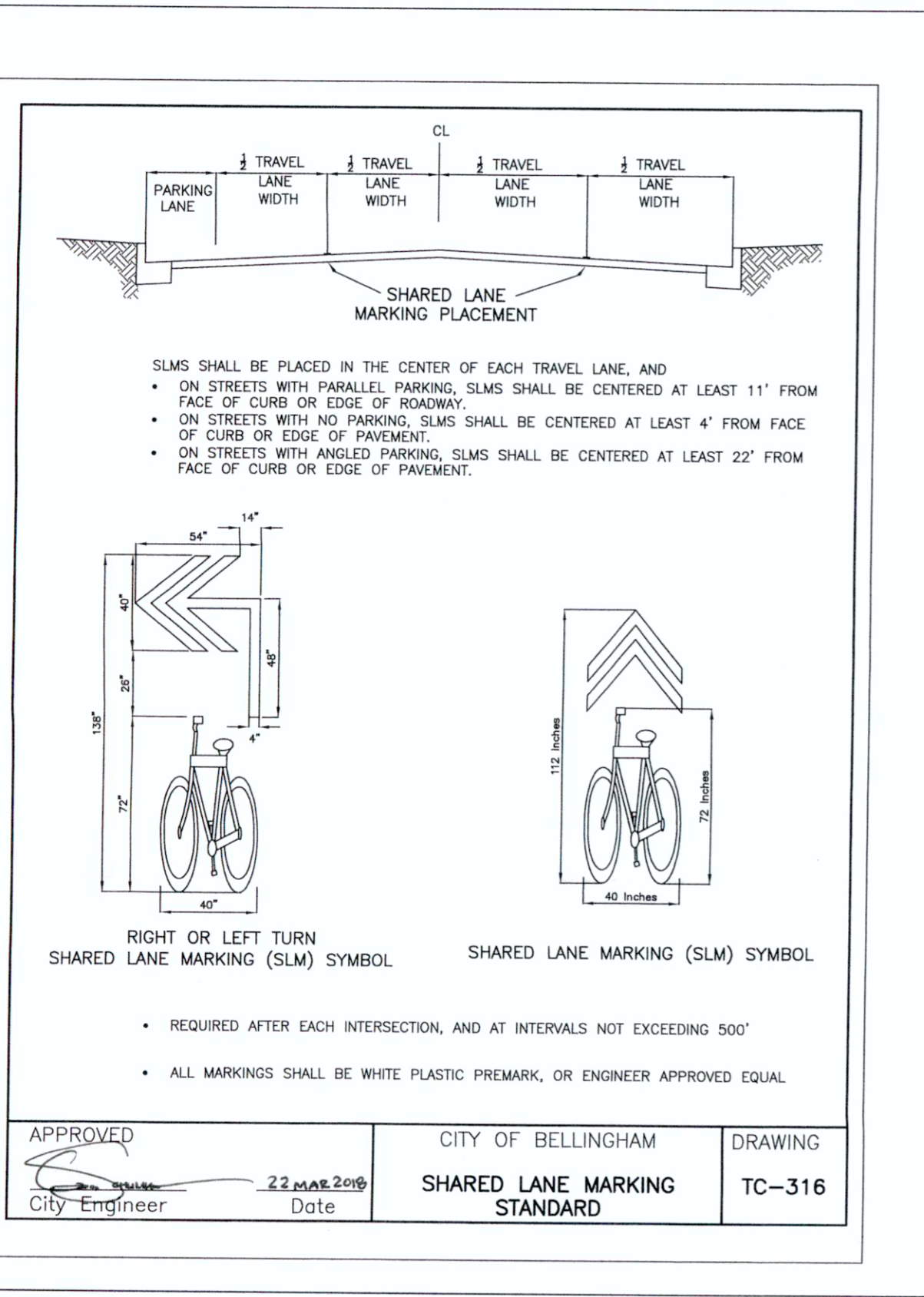
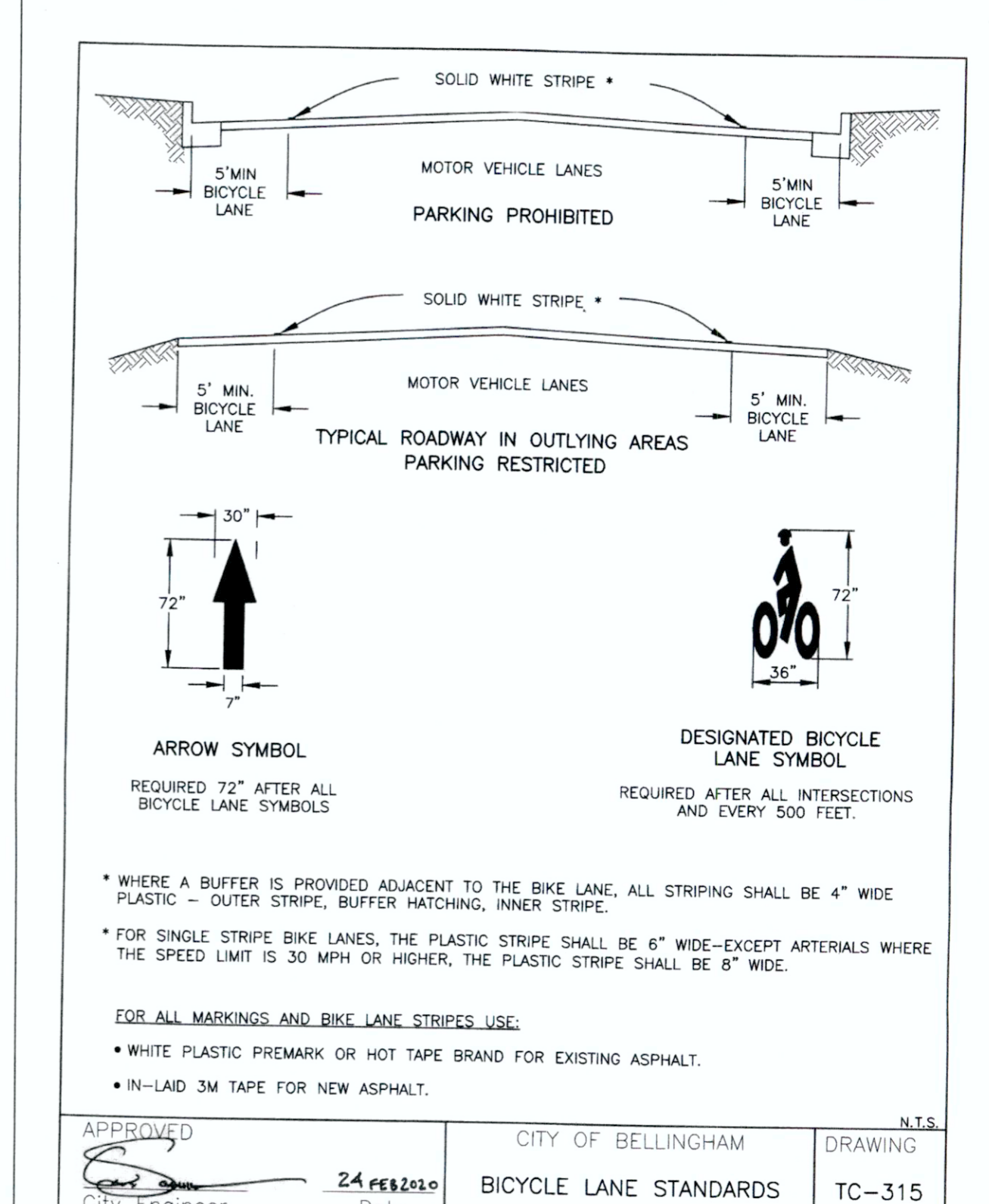
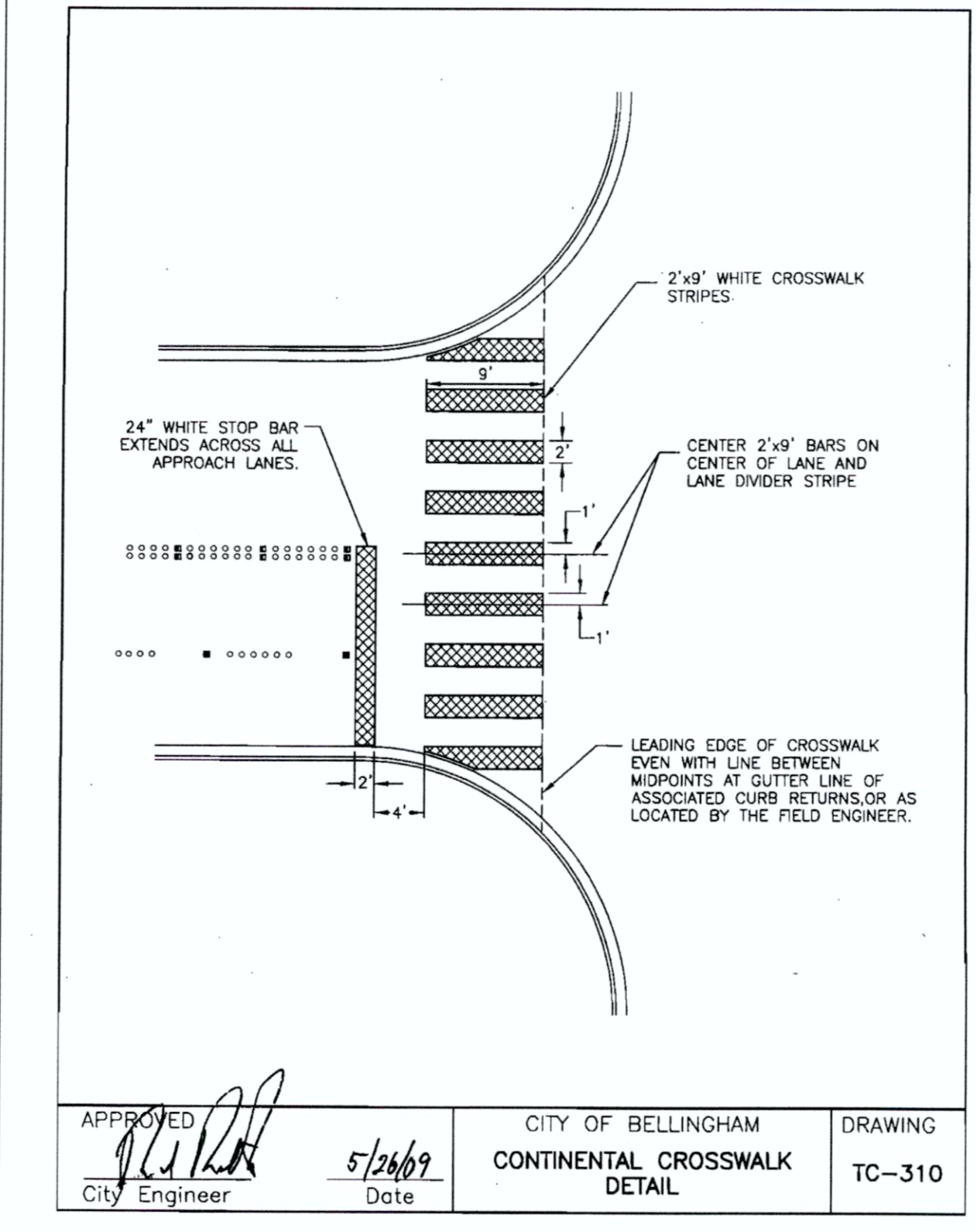
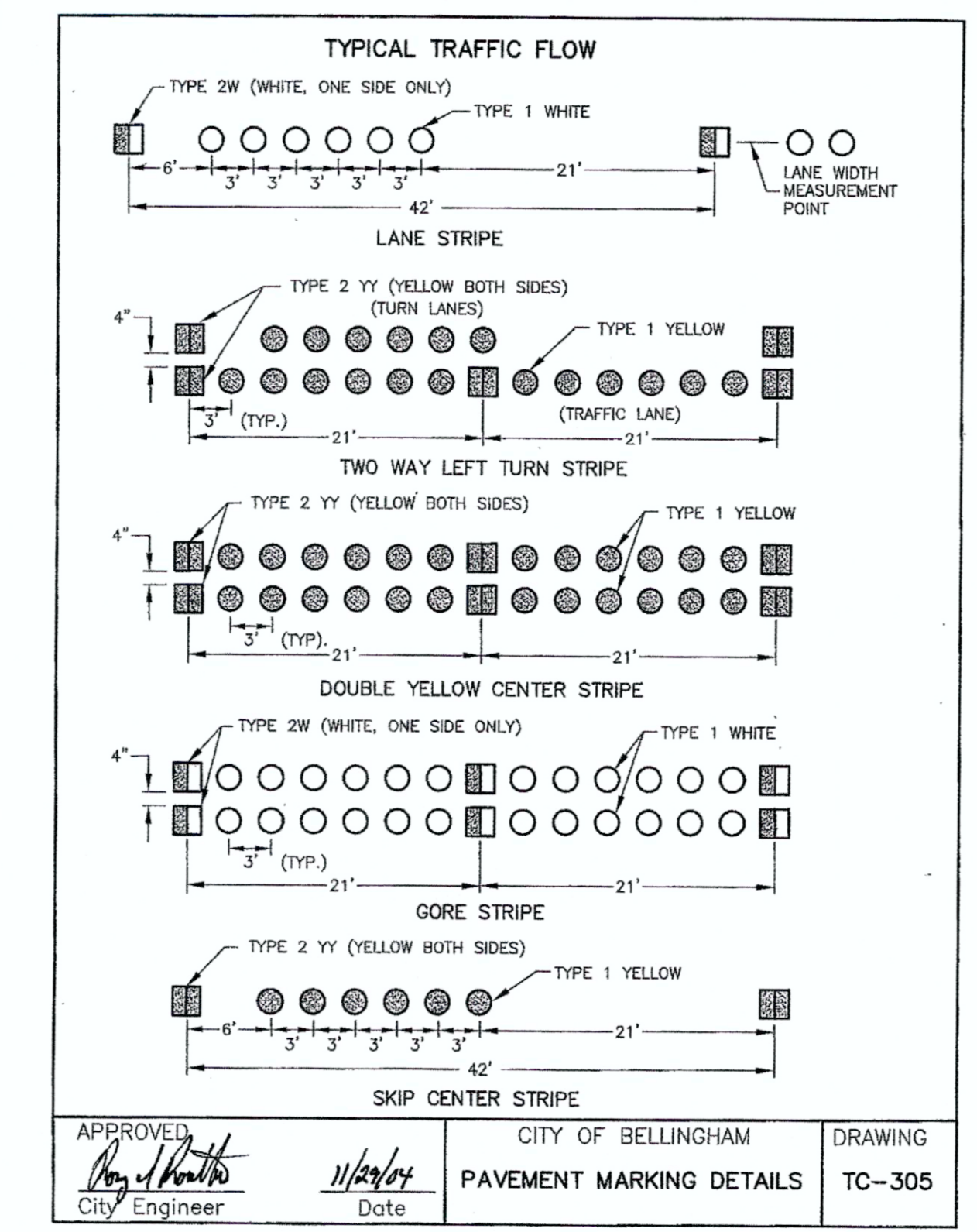
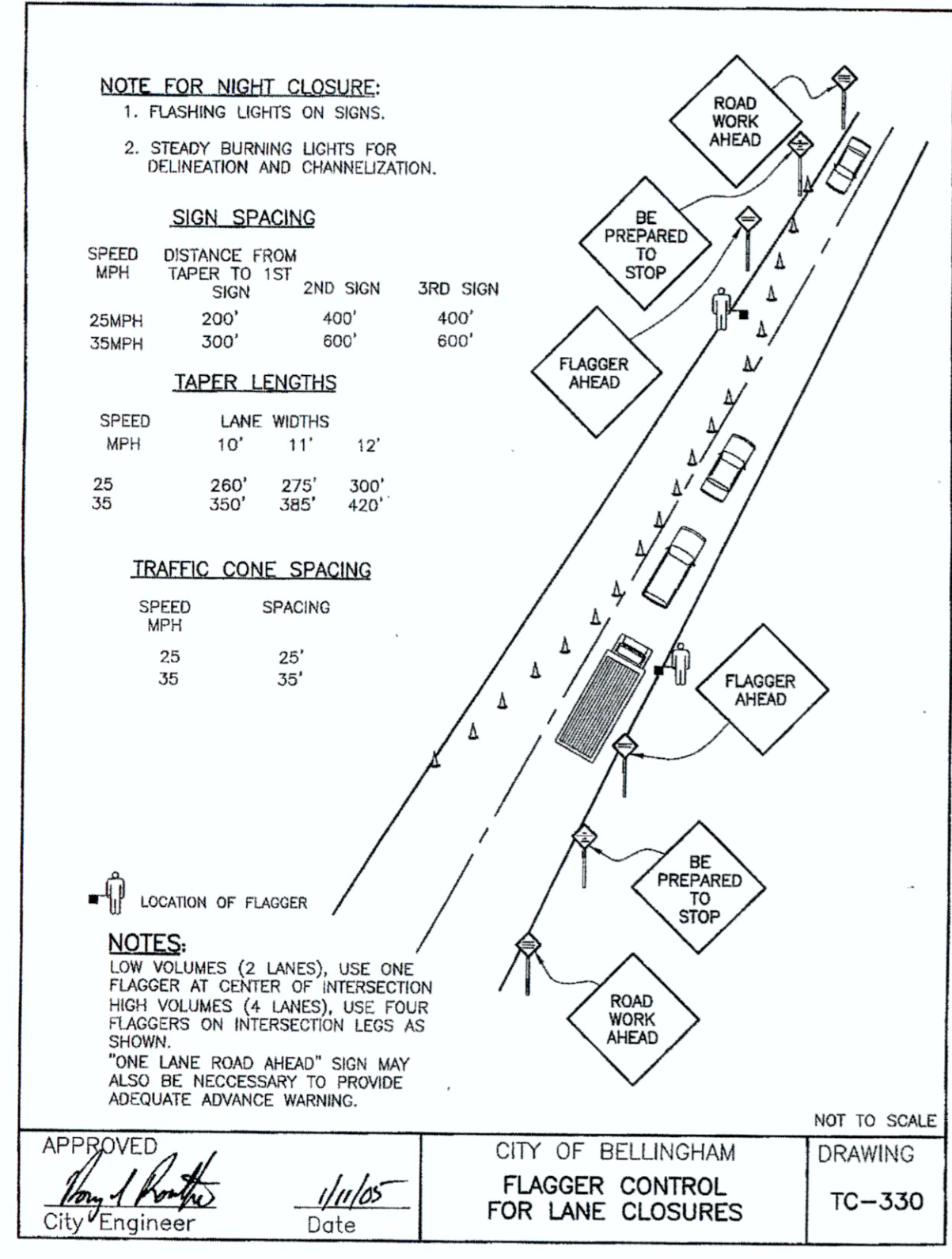
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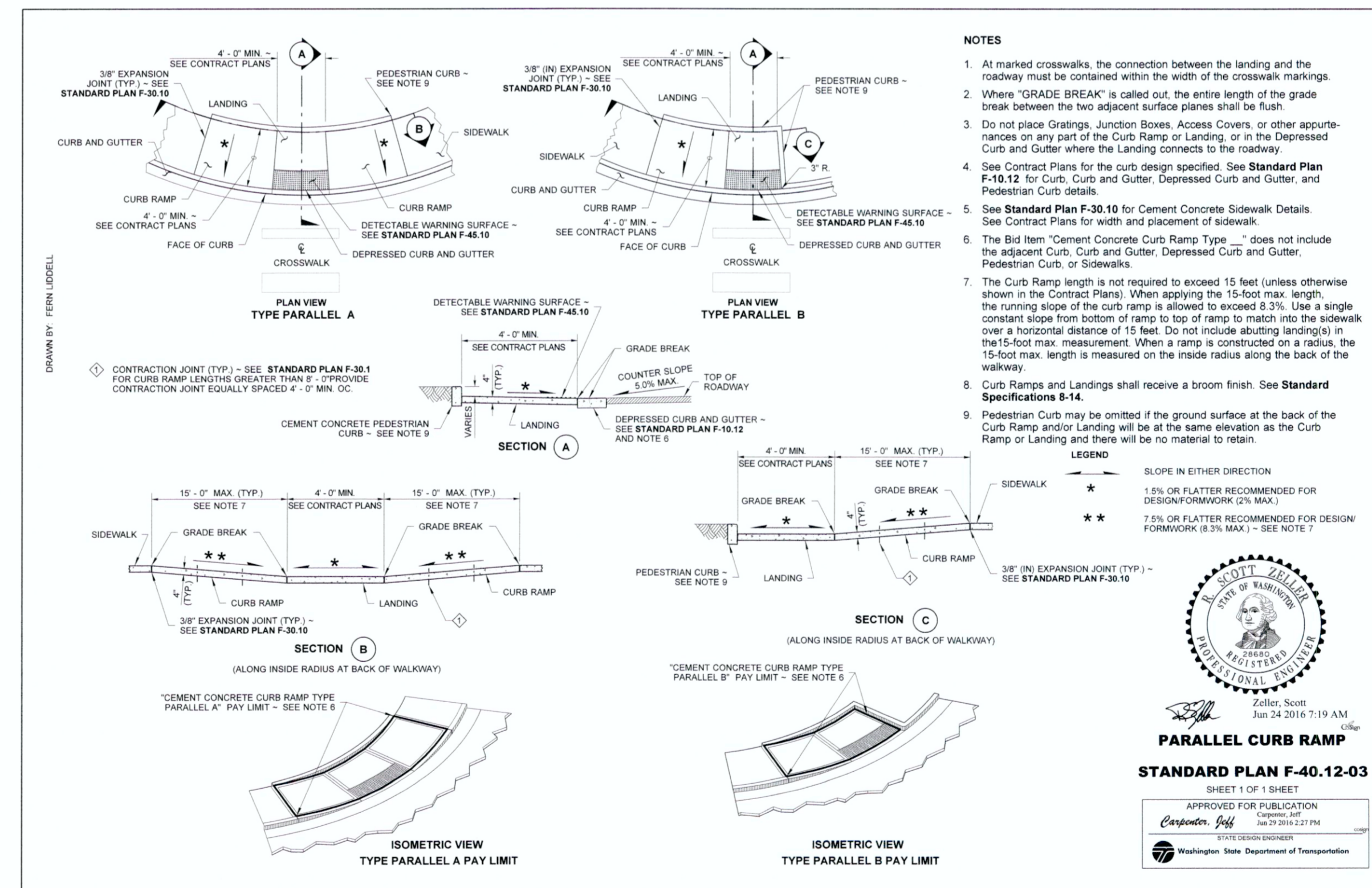
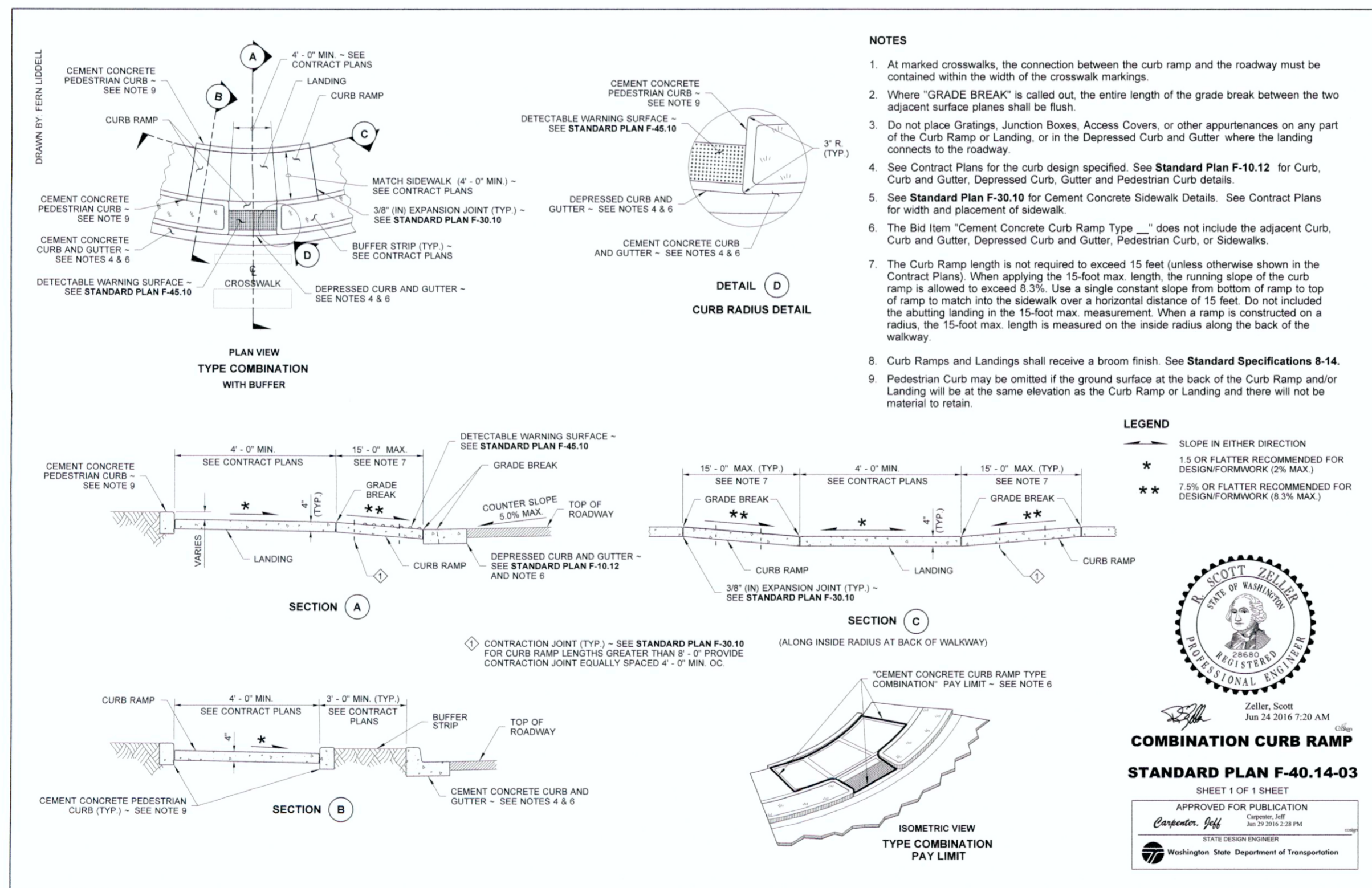
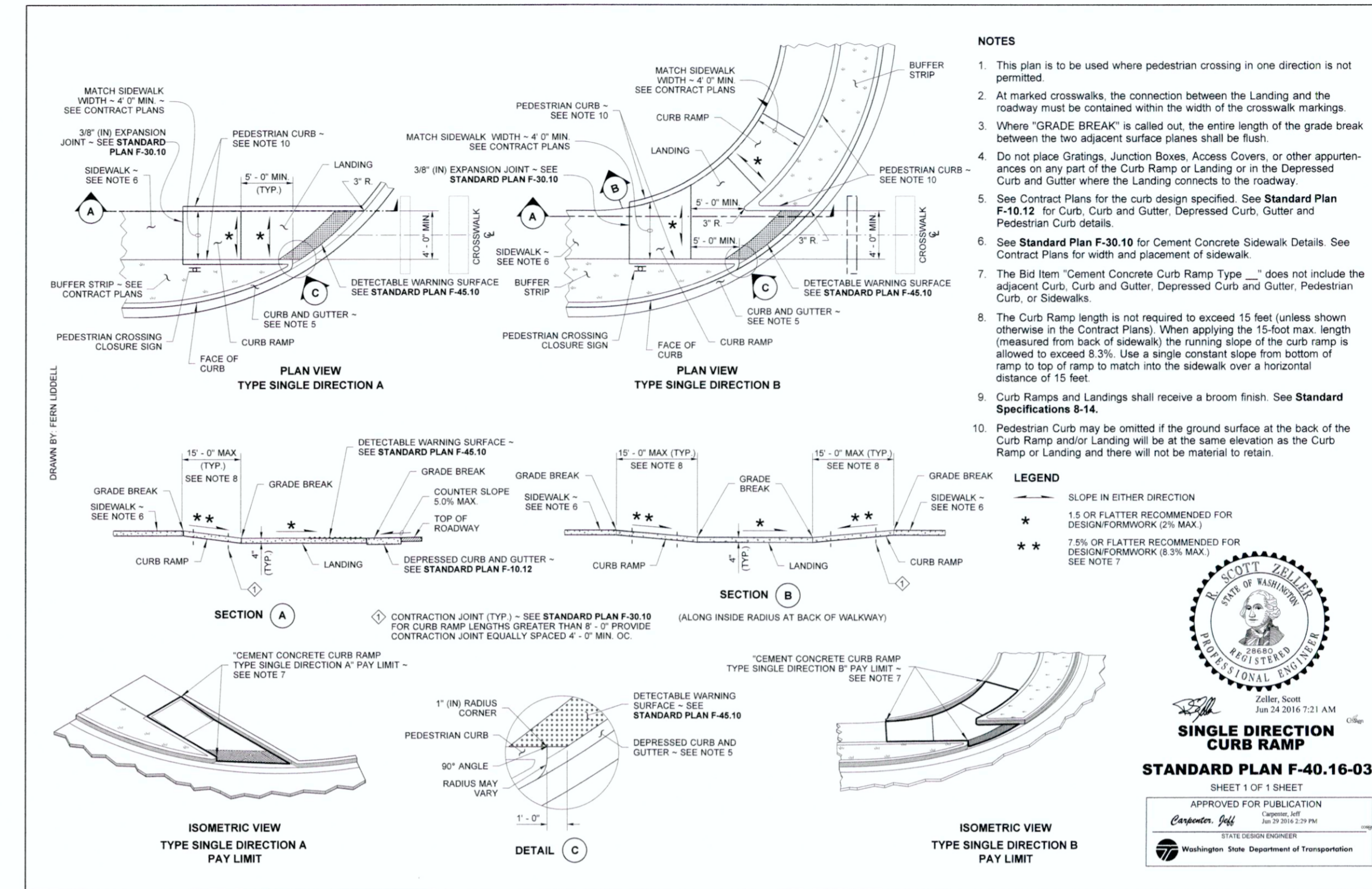
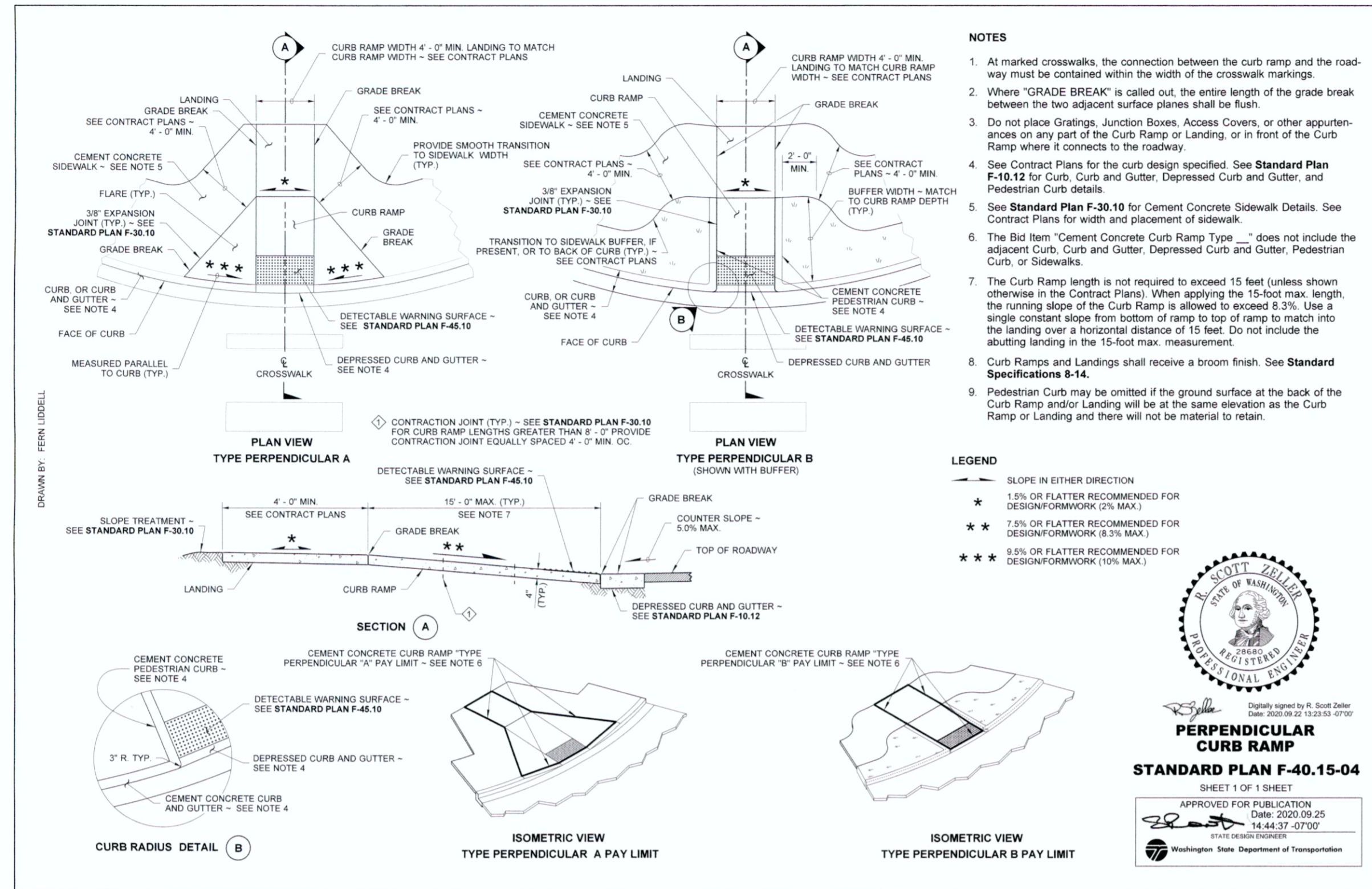
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Job. No.	ES-0563
Date	02/20/23
Field Bk.	FB

WESTSIDE NON MOTORIZED IMPROVEMENTS  
CITY OF BELLINGHAM STANDARD DETAILS

SHEET	41	OF	45
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Date	No	Revision	By

PROJECT ENGINEER JJB  
DESIGNED/DRAWN ELH  
INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.  
CITY ENGINEER C.M.A.S.  
OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

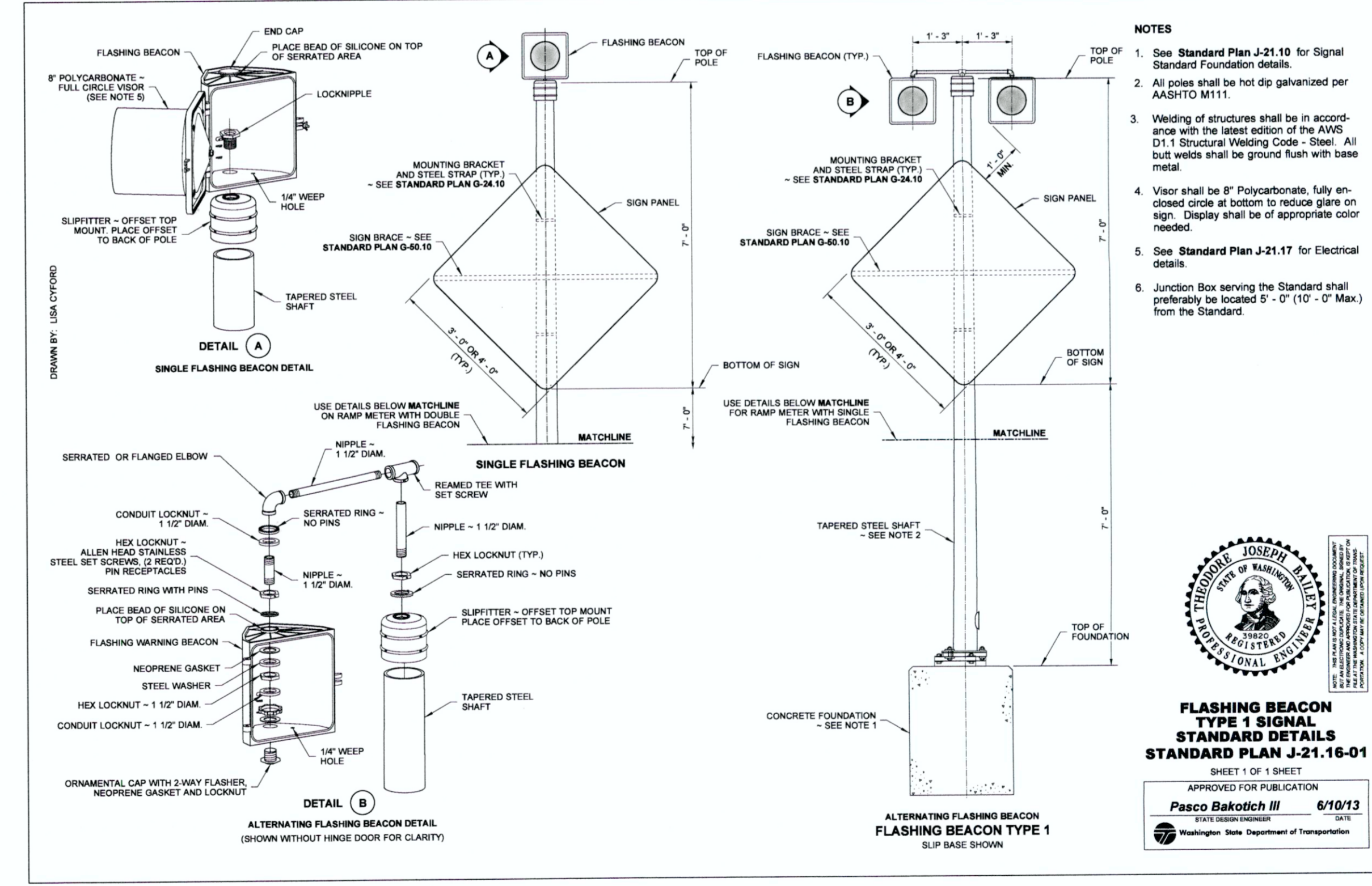
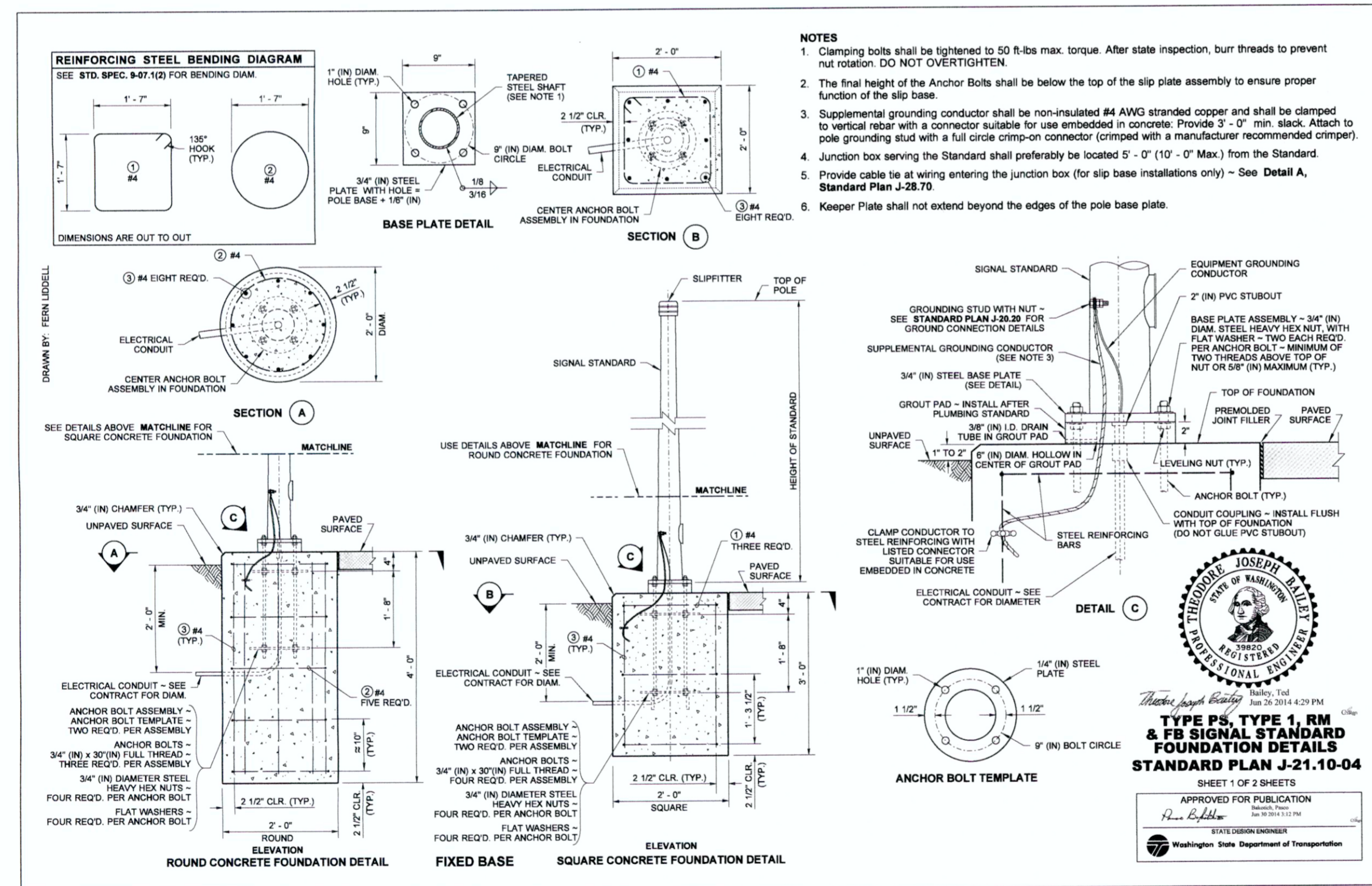
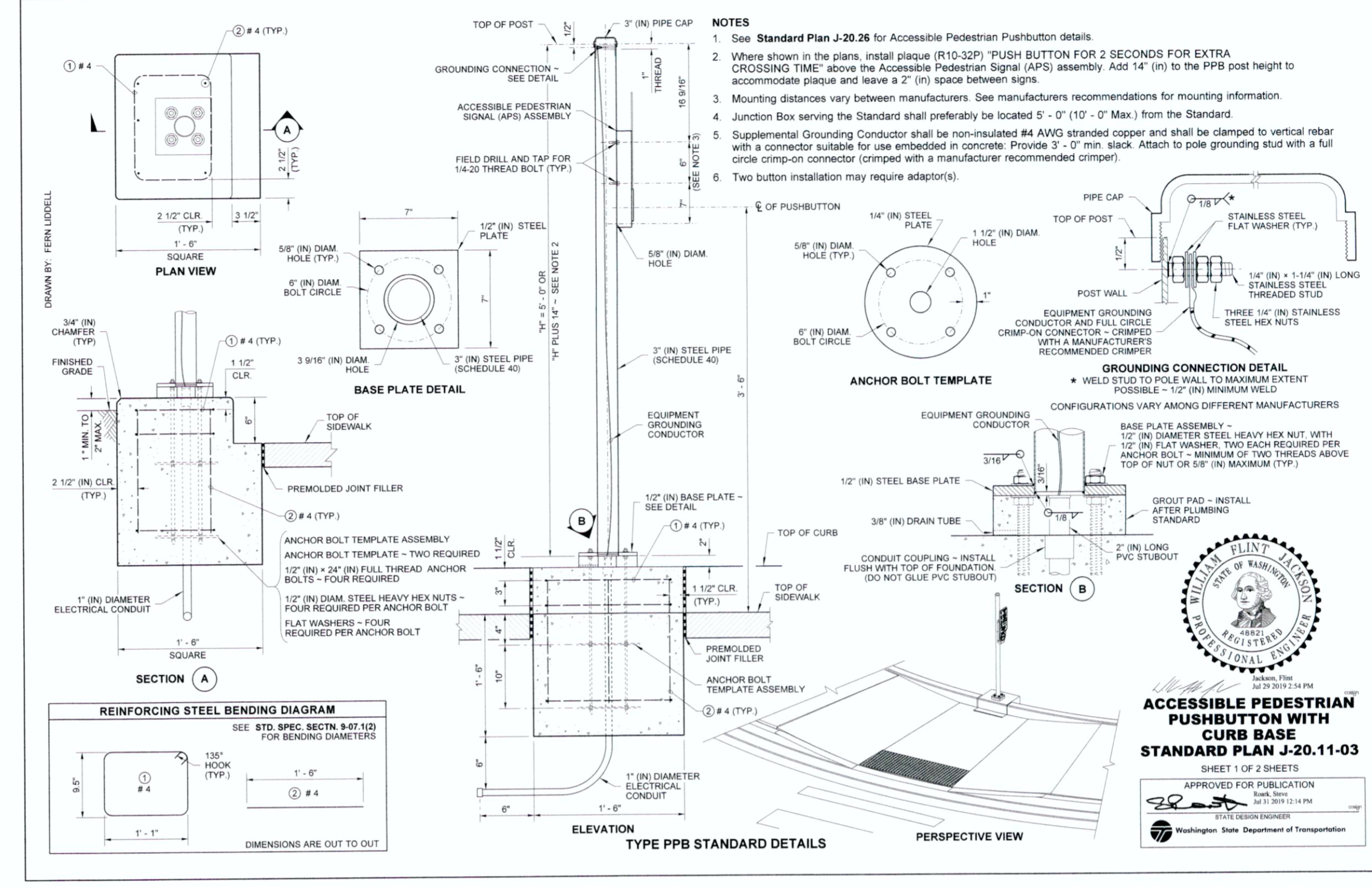
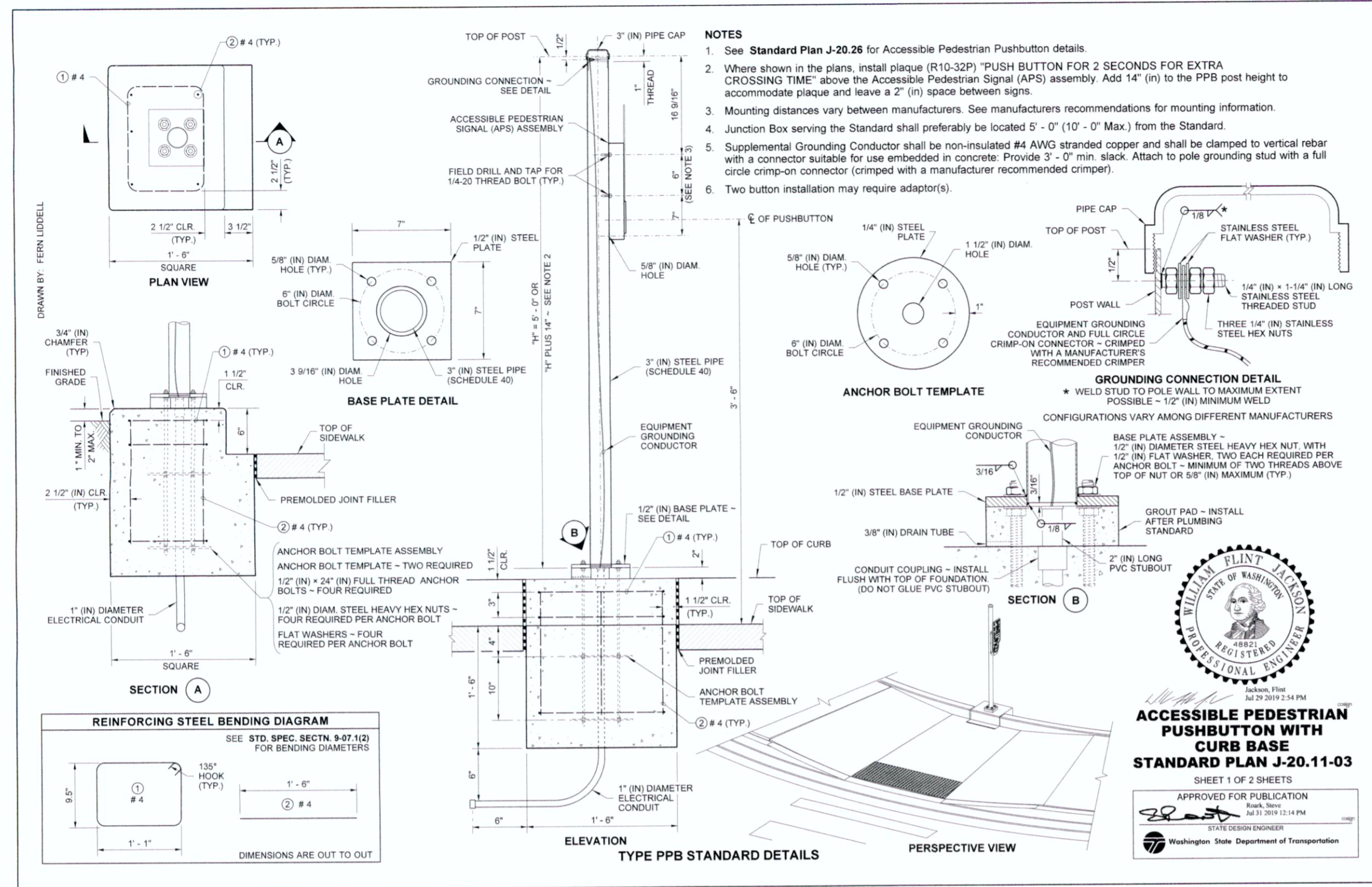
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NAD 83/98  
NAVD 88

Job. No. ES-0563  
Date 02/20/23  
Field Bk. FB

**WESTSIDE NON MOTORIZED IMPROVEMENTS**  
WSDOT STANDARD DETAILS

SHEET 43 OF 45



Date	No	Revision	By
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PROJECT ENGINEER JJB  
 DESIGNED/DRAWN ELH  
 INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.  
 CITY ENGINEER C.M.A.S.  
 OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
**PUBLIC WORKS DEPARTMENT**  
 ENGINEERING DIVISION

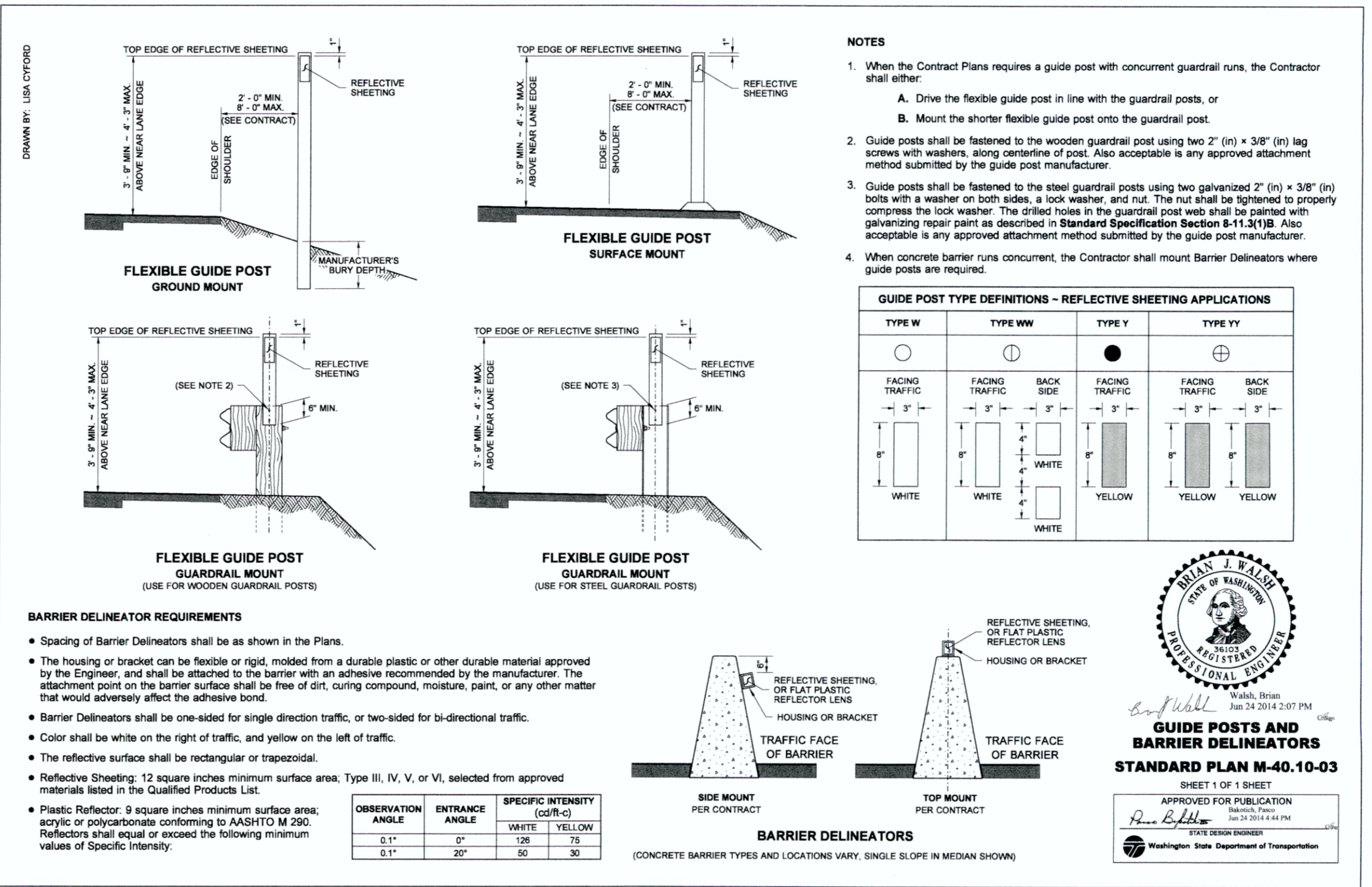
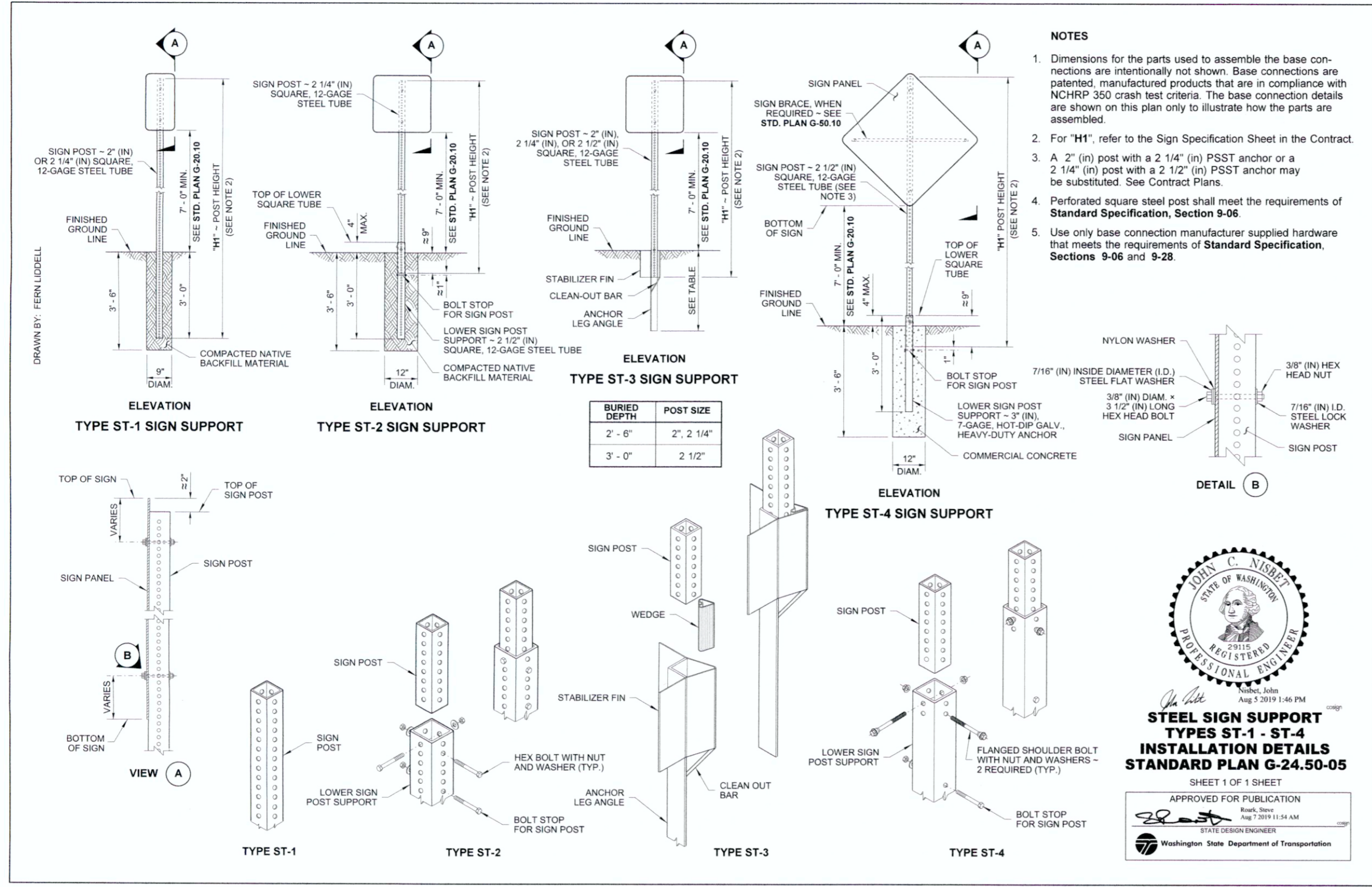
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Job. No. ES-0563  
 Date 02/2023  
 Field Bk. FB

**WESTSIDE NON MOTORIZED IMPROVEMENTS**  
**WSDOT STANDARD DETAILS**

SHEET 44 OF 45



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Date	No	Revision	By

PROJECT ENGINEER JJB  
DESIGNED/DRAWN ELH  
INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.  
CITY ENGINEER C.M.A.S.  
OPERATIONS ENGINEER M.A.O.

**CITY OF BELLINGHAM, WASHINGTON**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

SCALE  
Horiz. 1"=20'  
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NAD 83/98  
NAVD 88

Job. No. ES-0563  
Date 02/2023  
Field Bk. FB

**WESTSIDE NON MOTORIZED IMPROVEMENTS**  
WSDOT STANDARD DETAILS

SHEET 45 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E., PROJECT ENGINEER AT 778-7923