CITY OF WALLA WALLA, WA.

STORMWATER LOW IMPACT DEVELOPMENT (LID) PROJECTS

ISAACS AVENUE AND ROSE STREET INTERSECTION

2014

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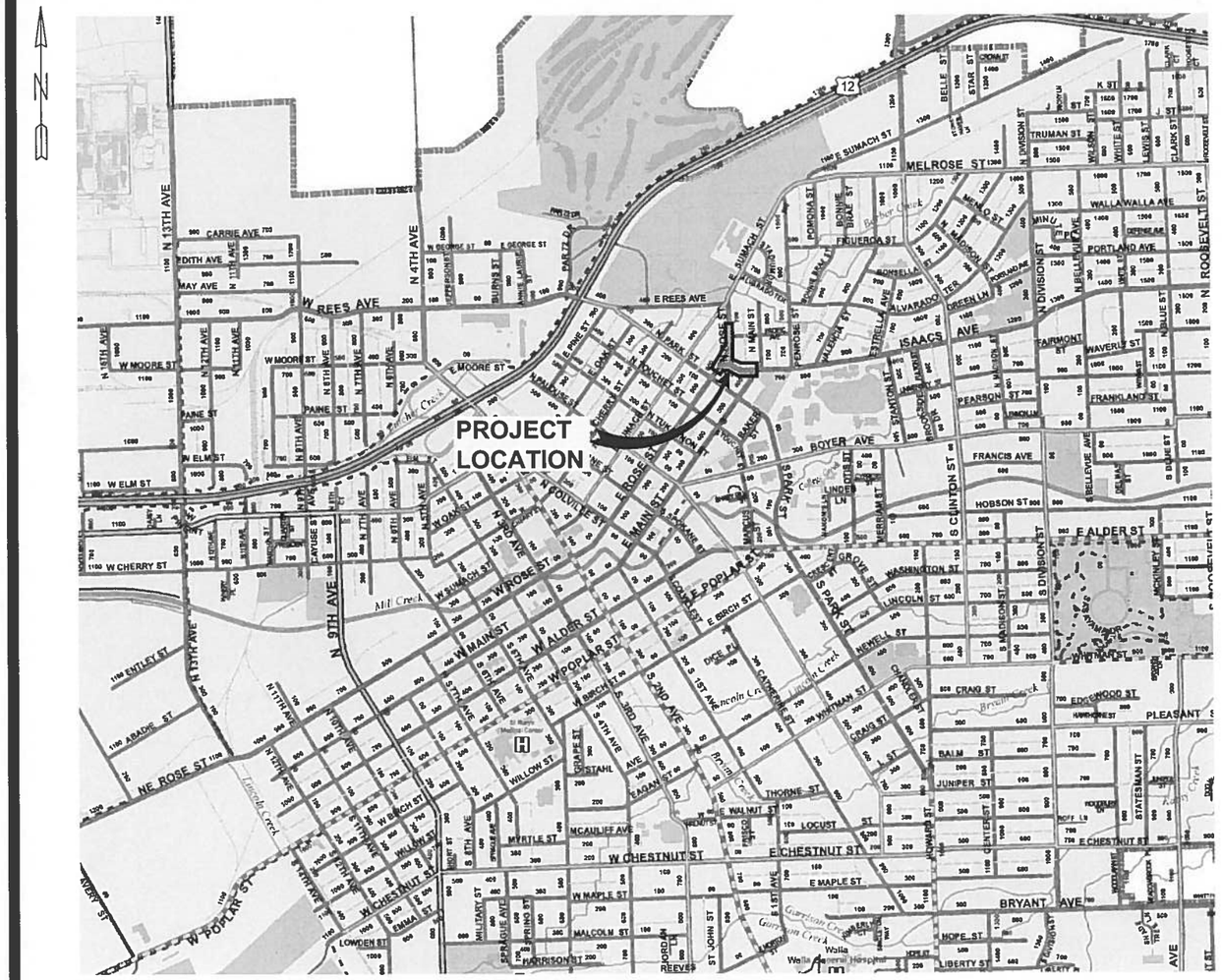

VICINITY MAP

NTS

CITY COUNCIL

JERRY CUMMINS - Mayor

CHRIS PLUCKER - Mayor Pro-tem

JIM BARROW

BARBARA CLARK

MARY LOU JENKINS

DICK MORGAN

ALLEN POMRANING

CITY OFFICIALS

NABIEL SHAWA - City Manager

KI BEALEY, P.E. - Public Works Director

NEAL CHAVRE, P.E. - City Engineer

JOSEPH M. MELDER JR.
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PRELIMINARY
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PROFESSIONAL ENGINEER

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LEGEND

WATER

	EXISTING	PROPOSED
WATER LINE	W	W
SERVICE CONNECTION	W	W
VALVES (GATE/BUTTERFLY/CHECK)		
CAP		
COUPLING		
REDUCER		
WATER METER		
FIRE HYDRANT		
THRUST BLOCK		
FLANGE		
AIR RELIEF		
BLOWOFF		

SEWER/STORM DRAIN

SANITARY SEWER LINE	SS	SS
SANITARY SEWER SERVICE	SS	SS
FORCE MAIN	FM	FM
STORM DRAIN LINE	SD	SD
STORM DRAIN CULVERT > 24" DIAMETER		
SANITARY SEWER MANHOLE		
SANITARY SEWER CLEANOUT		
STORM DRAIN MANHOLE		
STORM DRAIN CATCH BASIN		
STORM DRAIN CLEANOUT		

MISC. UTILITIES

BURIED POWER	UGP	P
OVERHEAD POWER	OHP	OHP
BURIED TELEPHONE	T	T
OVERHEAD TELEPHONE	OHT	OHT
BURIED TV	TV	TV
OVERHEAD TV	OTV	OTV
GAS	G	G
IRRIGATION		
UTILITY POLE		
UTILITY POLE ANCHOR		
PAD TRANSFORMER		
POWER VAULT	P	P
TELEPHONE RISER/VAULT	T	T
FIBER OPTIC VAULT	F	F
GAS METER		
WATER FAUCET		
STREET LIGHT		
YARD LIGHT		
GUARD POST		
ADDRESS POST		

SURVEY

	EXISTING	PROPOSED
ANGLE POINT		
BENCH MARK		
BLOCK CORNER		
IRON PIPE		
MONUMENT (IN CASE)		
MONUMENT (SURFACE)		
SOIL BORING/TEST PIT		
CENTERLINE		
RIGHT-OF-WAY		
PROPERTY LINE		
EASEMENT LINE		
SECTION LINE		

SURFACE FEATURES

INDEX CONTOUR	740	740
INTERMEDIATE CONTOUR		
CREEK/DITCH CENTERLINE		
RETAINING WALL		
SIDEWALK CURB & GUTTER		
DRIVEWAY/ACCESS RAMP W/WARNING STRIP		
EDGE ASPHALT/CONCRETE		
EDGE GRAVEL		
FENCE LINE/GATE		
GUARDRAIL		
RAILROAD		
DAYLIGHT/CATCH POINT		
TREE, CONIFER		
TREE, DECIDUOUS		
SHRUB/BRUSH		
STUMP		
RIPRAP		
SIGN		
MAILBOX		
BUILDING	728	728

RESTORATION

	EXISTING	PROPOSED
ASPHALT HATCH		
GRAVEL HATCH		
CONCRETE HATCH		
ROSE STREET SURFACING PCC WHITETOPPING (ALTERNATE A1) HMA (ALTERNATE A2)		

TRAFFIC CONTROL

TYPICAL TRAFFIC CONTROL ARROWS		
TYPICAL TRAFFIC CONTROL SYMBOLS	STOP	STOP
TYPICAL TRAFFIC DIVIDER LINES		
FOG LINE		

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DRAWN BY D. LUTTON
REVIEWED BY A. SCHMIDTGALL

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ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

LEGEND

SHEET
G-002
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GENERAL CONSTRUCTION NOTES

1. THESE PLANS, SPECIFICATIONS, AND REFERENCED DOCUMENTS SHALL BE USED TO CONSTRUCT THE IMPROVEMENTS SHOWN. REFERENCED DOCUMENTS INCLUDE THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (2014 EDITION), WSDOT STANDARD PLANS, CITY OF WALLA WALLA STANDARD PLANS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL. WSDOT STANDARD PLANS SHALL BE USED AS A GUIDE FOR TRAFFIC CONTROL. THE CONTRACTOR SHALL SUBMIT DETAILED TRAFFIC CONTROL PLANS AND OBTAIN APPROVAL FROM THE CITY PRIOR TO THE START OF CONSTRUCTION. ALL SIGNING SHALL COMPLY WITH THE MUTCD AND ALL TRAFFIC OPERATIONS MUST BE ACCEPTABLE TO THE CITY OF WALLA WALLA.

3. ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE SHOWN WITH AS MUCH ACCURACY AS POSSIBLE, BASED ON AVAILABLE INFORMATION. SOME DISCREPANCIES AND OMISSIONS IN LOCATION, TYPE, AND SIZE SHOULD BE EXPECTED TO OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES IN AND AROUND THE WORK AREAS. BOTH PRIVATE AND PUBLIC POWER, WATER, IRRIGATION, TELEPHONE, GAS, CABLE, AND WASTEWATER SHALL BE INCLUDED. ANY DISCREPANCIES BETWEEN THE DESIGN SHEETS AND EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.

4. THE CONTRACTOR SHALL RESTORE ALL PROPERTIES TO THE SAME OR BETTER CONDITION THAN EXISTED PRIOR TO CONSTRUCTION. IF RESTORATIONS TO EXISTING STRUCTURES ARE NECESSARY AS A RESULT OF THE CONTRACTOR'S ACTIONS, THIS WORK SHALL BE COMPLETED TO THE STANDARDS OF THE APPLICABLE TRADE AND BE COMPLETED BY QUALIFIED PERSONNEL EXPERIENCED IN THE APPLICABLE TRADE. THIS INCLUDES, BUT IS NOT LIMITED TO, PRIMING, PAINTING, SANDING, SCRAPING, PATCHING, OR FASCIA WORK. PAINT COLORS AND MATERIALS SHALL MATCH EXISTING UNLESS APPROVED OTHERWISE IN WRITING BY THE PROPERTY/BUILDING OWNER. RESTORATION WORK SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS FOLLOWING REPLACEMENT OF SIDEWALKS. COORDINATE WORK ON EXISTING STRUCTURES AND PRIVATE PROPERTY WITH THE CITY AND WITH THE PROPERTY OWNERS.

5. THE CONTRACTOR SHALL PROVIDE CONTINUOUS ACCESS FOR EMERGENCY VEHICLES, LOCAL BUSINESSES, RESIDENCES, AND THEIR RESPECTIVE DRIVEWAYS. ACCESS SHALL ALSO BE PROVIDED FOR MAIL DELIVERY, SANITATION, AND OTHER MUNICIPAL/PRIVATE UTILITY PROVIDERS.

6. SAW CUT ALL EXISTING ASPHALT AND CONCRETE WHERE JOINTS WITH NEW CONSTRUCTION WILL OCCUR.

7. EXISTING POWER AND IRRIGATION TO STREET TREES EXISTS AT VARIOUS LOCATIONS THROUGHOUT THE PROJECT. WHERE IMPACTED BY CONSTRUCTION, THE POWER AND IRRIGATION SHALL BE REESTABLISHED AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID BY FORCE ACCOUNT. REPAIRS SHALL BE MADE WITH EXISTING MATERIALS OR EQUAL REPLACEMENTS AS NECESSARY.

8. THROUGHOUT THE PROJECT AREA, BENCHES, BIKE RACKS, MAILBOXES AND TRASH RECEPTACLES EXIST NEAR THE CURB LINE THAT MAY BE IMPACTED BY CONSTRUCTION. THE CONTRACTOR SHALL PROTECT, TEMPORARILY RELOCATE, AND REINSTALL THESE FACILITIES WHERE IMPACTED BY CONSTRUCTION. THE CONTRACTOR IS ADVISED THAT THE LOCATION OF FENCES, MAIL AND PAPER BOXES, TREES, LANDSCAPING, AND OTHER OBJECTS, IF SHOWN IN THE PLANS, IS PROVIDED SOLELY TO PROVIDE WARNING OF THE PROBABLE LOCATION OF SAID OBJECTS AND MAY NOT BE PRECISE OR COMPLETE. CONTRACTOR SHALL SATISFY HIMSELF AS TO THE EXACT LOCATIONS BY CONTACTING THE PROPERTY OWNERS BEFORE PROCEEDING WITH WORK.

9. THE EXISTING SUBGRADE IN SWALES AND BIORETENTION SOIL SHALL NOT BE COMPACTED GREATER THAN 85% MAXIMUM DENSITY. THE CONTRACTOR SHALL LIMIT THE USE OF EQUIPMENT IN SWALE AREAS TO PREVENT OVER COMPACTION OF SUBGRADE MATERIALS.

VERTICAL DATUM

PRIMARY VERTICAL CONTROL IS BASED ON CITY OF WALLA WALLA GPS CONTROL NETWORK. POINTS 712 & 910 WERE UTILIZED HOLDING AN ELEVATION OF 899.88 FEET AT CITY CONTROL POINT NUMBER 712 AS SHOWN ON RECORD OF SURVEY FILED IN BOOK 6 OF SURVEYS AT PAGE 263, RECORDS OF WALLA WALLA COUNTY, WASHINGTON. A CLOSED PRECISE DIGITAL LEVEL LOOP WAS USED TO ESTABLISH VERTICAL CONTROL ON PROJECT CONTROL POINTS.

BASIS OF BEARING/HORIZONTAL DATUM

PRIMARY HORIZONTAL CONTROL WAS ESTABLISHED UTILIZING RTK GPS METHODS WITH TIES TO THE CITY OF WALLA WALLA GPS CONTROL NETWORK POINTS 712, 410, & 910. THE COORDINATES OF POINT 712 BEING NORTH 273,793.22 FEET AND EAST 2,184,464.60 FEET WERE HELD AND THE GRID BEARING BETWEEN 712 AND 410 BEING S57°50'50"W WAS HELD FOR BASIS OF BEARING. THE CITY GPS CONTROL NETWORK IS BASED ON WASHINGTON STATE PLANE COORDINATES - SOUTH ZONE NAD83(91) AND IS REFERENCED ON RECORD OF SURVEY FILED IN BOOK 6 OF SURVEYS AT PAGE 263, RECORDS OF WALLA WALLA COUNTY, WASHINGTON. ALL DIMENSIONS AND MEASUREMENTS SHOWN ARE GROUND VALUES.

REVISION	BY	DATE

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DRAWN BY D. LUTTON
REVIEWED BY A. SCHMIDTGALL

HORZ. SCALE | VERT. SCALE
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ISAACS AVENUE AND ROSE STREET INTERSECTION
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GENERAL NOTES

SHEET
G-003
3 OF __

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EROSION CONTROL NOTES

1. STORMWATER RUNOFF FROM THE SITE SHALL NOT BE ALLOWED TO ENTER SURFACE WATER BODIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ALL BEST MANAGEMENT PRACTICES (BMP'S) AS APPLICABLE TO PREVENT DEBRIS, OILS, SEDIMENTS, ETC. FROM ENTERING SURFACE AND/OR GROUNDWATER. BMP'S NOT LISTED CAN BE FOUND IN THE "STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON" PREPARED BY THE DEPARTMENT OF ECOLOGY, LATEST EDITION.

2. INLET PROTECTION SHALL BE PROVIDED FOR ALL CATCH BASINS IMMEDIATELY DOWNSTREAM OF THE PROJECT LIMITS. THE CONTRACTOR SHALL INSPECT ALL BARRIERS AFTER EACH STORM EVENT AND REMOVE ANY SEDIMENTATION TO ENSURE THAT NO SEDIMENTS ARE ENTERING THE CATCH BASIN.

3. DUST CONTROL SHALL BE ONGOING THROUGH THE DURATION OF THE PROJECT UNTIL THE SITE HAS BEEN PAVED OR STABILIZED WITH PERMANENT VEGETATION. THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO CONTROL DUST CAUSED BY THEIR OPERATIONS. THIS SHALL INCLUDE, BUT NOT LIMITED TO WATERING OF EXPOSED AREAS.

4. CONTRACTOR SHALL INSTALL AN APPROVED CONSTRUCTION SITE ENTRANCE INTO THE WORK ZONE TO PREVENT ANY TRACK-OUT OF MATERIAL ONTO STREET SURFACES. ANY TRACK-OUT SHALL BE CLEANED UP BY THE CONTRACTOR DAILY AT THE CONTRACTOR'S COST.

5. LOCATION(S) OF THE CONSTRUCTION ENTRANCE SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.

6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT OUT OF THE WORK ZONE ONTO ADJACENT ROADWAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

7. IF TRACK OUT OCCURS WITH A PROPERLY MAINTAINED ENTRANCE IN PLACE, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO STREETS OUTSIDE THE WORK ZONE.

8. SHOULD TIRE WASHING BE REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

9. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL A SPILL PREVENTION, CONTROL AND COUNTERMEASURES (SPCC) PLAN IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 1-07.15(1). NO ON-SITE CONSTRUCTION ACTIVITIES MAY COMMENCE UNTIL THE CITY OF WALLA WALLA ACCEPTS THE SPCC PLAN.

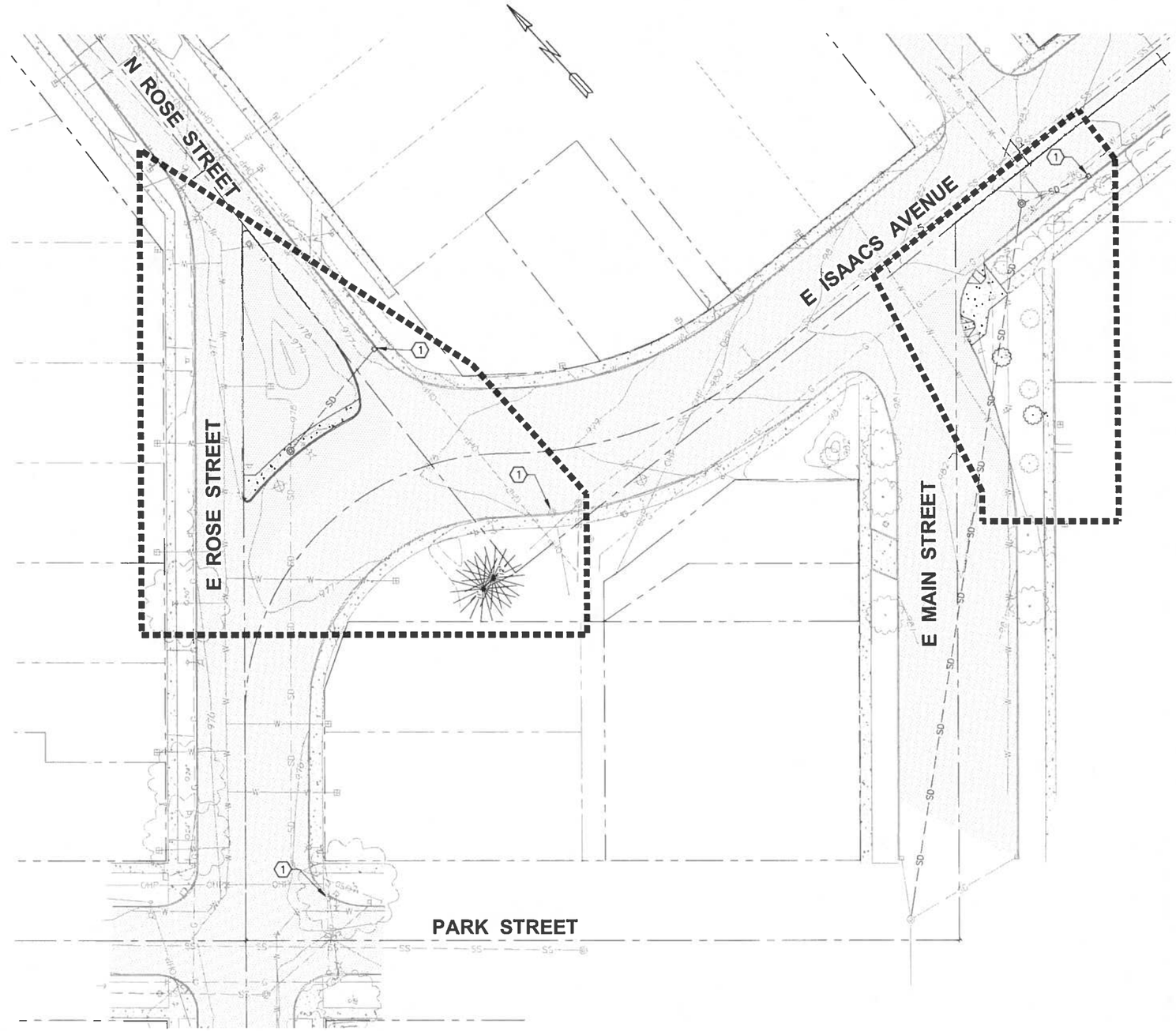
10. PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUNDWATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.

CONSTRUCTION NOTES

(1) STORM DRAIN INLET PROTECTION SEE WSDOT STD PLAN I-40.20-00.

LEGEND

WORK AREA



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STATE OF WASHINGTON
49109
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2014

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

SHEET G-004 OF __

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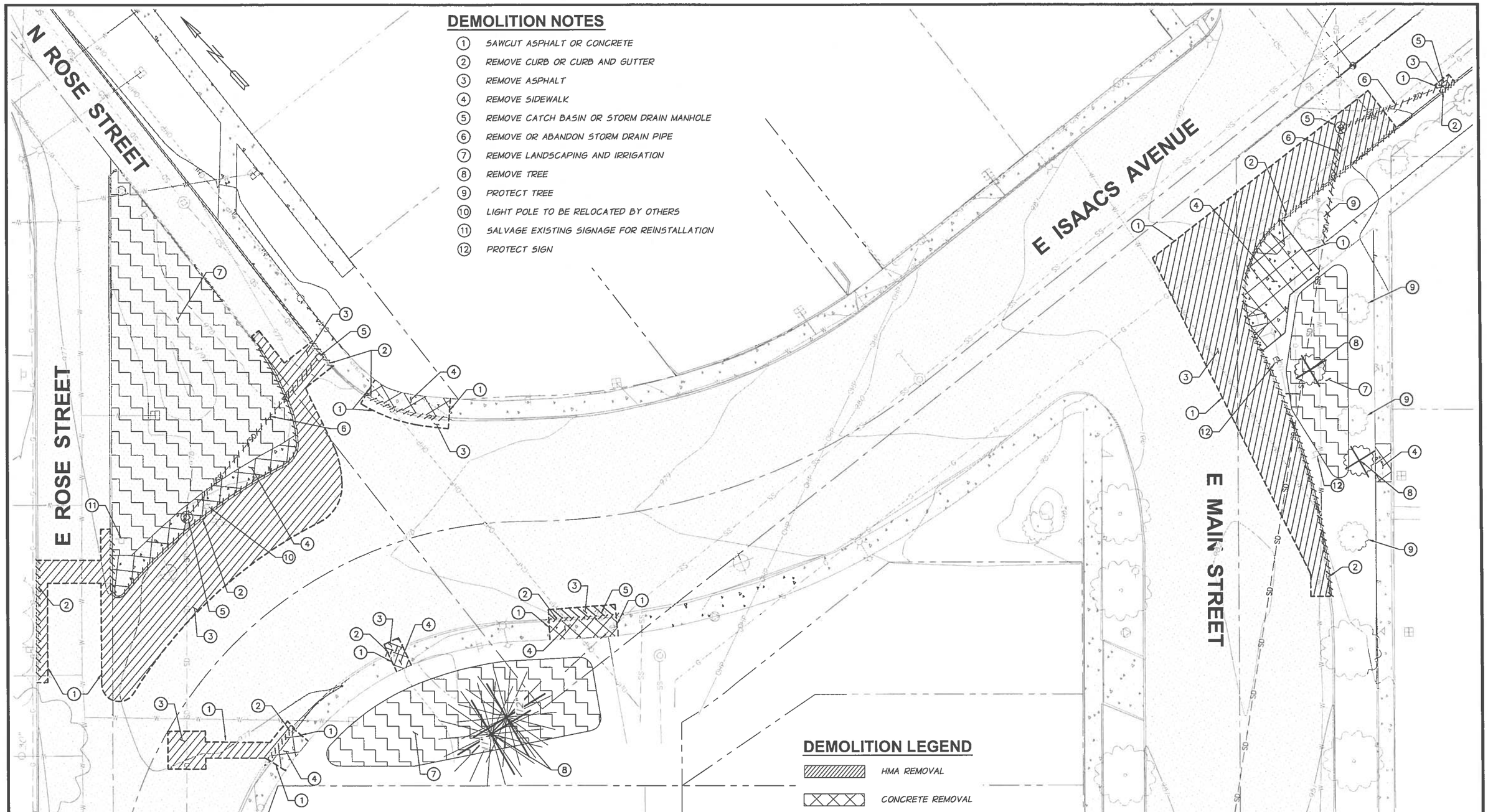

DEMOLITION NOTES

1. SAWCUT ASPHALT OR CONCRETE
2. REMOVE CURB OR CURB AND GUTTER
3. REMOVE ASPHALT
4. REMOVE SIDEWALK
5. REMOVE CATCH BASIN OR STORM DRAIN MANHOLE
6. REMOVE OR ABANDON STORM DRAIN PIPE
7. REMOVE LANDSCAPING AND IRRIGATION
8. REMOVE TREE
9. PROTECT TREE
10. LIGHT POLE TO BE RELOCATED BY OTHERS
11. SALVAGE EXISTING SIGNAGE FOR REINSTALLATION
12. PROTECT SIGN

DEMOLITION LEGEND

- HMA REMOVAL
- CONCRETE REMOVAL
- LANDSCAPE REMOVAL
- CURB/PIPE REMOVAL
- SAWCUT LINE

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15 0 15 30 45
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DEMOLITION PLAN

SHEET C-101 OF __

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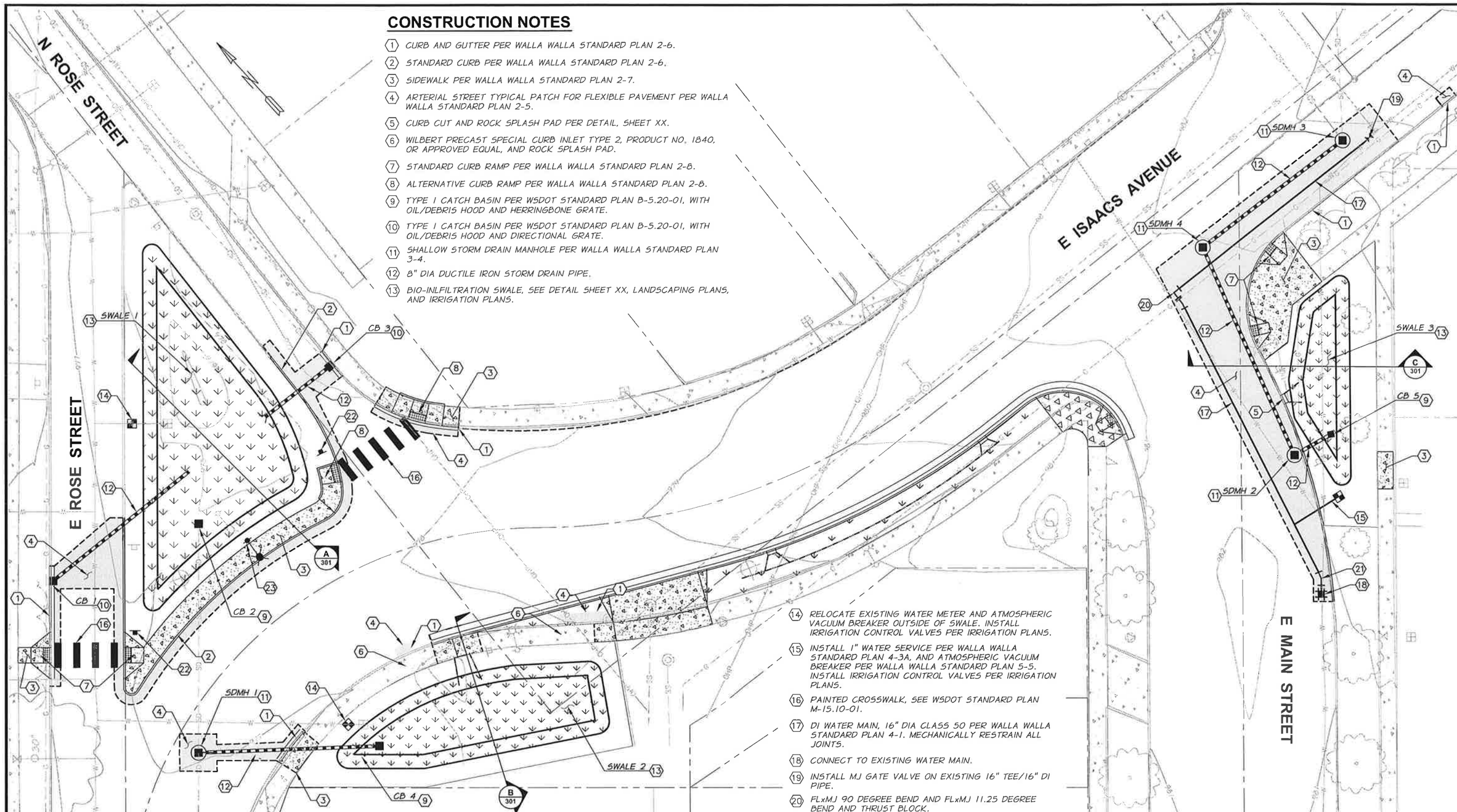
CONSTRUCTION NOTES

1. CURB AND GUTTER PER WALLA WALLA STANDARD PLAN 2-6.
2. STANDARD CURB PER WALLA WALLA STANDARD PLAN 2-6.
3. SIDEWALK PER WALLA WALLA STANDARD PLAN 2-7.
4. ARTERIAL STREET TYPICAL PATCH FOR FLEXIBLE PAVEMENT PER WALLA WALLA STANDARD PLAN 2-5.
5. CURB CUT AND ROCK SPLASH PAD PER DETAIL, SHEET XX.
6. WILBERT PRECAST SPECIAL CURB INLET TYPE 2, PRODUCT NO. 1840, OR APPROVED EQUAL, AND ROCK SPLASH PAD.
7. STANDARD CURB RAMP PER WALLA WALLA STANDARD PLAN 2-8.
8. ALTERNATIVE CURB RAMP PER WALLA WALLA STANDARD PLAN 2-8.
9. TYPE 1 CATCH BASIN PER WSDOT STANDARD PLAN B-5.20-01, WITH OIL/DEBRIS HOOD AND HERRINGBONE GRATE.
10. TYPE 1 CATCH BASIN PER WSDOT STANDARD PLAN B-5.20-01, WITH OIL/DEBRIS HOOD AND DIRECTIONAL GRATE.
11. SHALLOW STORM DRAIN MANHOLE PER WALLA WALLA STANDARD PLAN 3-4.
12. 8" DIA DUCTILE IRON STORM DRAIN PIPE.
13. BIO-INLFILTRATION SWALE, SEE DETAIL SHEET XX, LANDSCAPING PLANS, AND IRRIGATION PLANS.



14. RELOCATE EXISTING WATER METER AND ATMOSPHERIC VACUUM BREAKER OUTSIDE OF SWALE. INSTALL IRRIGATION CONTROL VALVES PER IRRIGATION PLANS.
15. INSTALL 1" WATER SERVICE PER WALLA WALLA STANDARD PLAN 4-3A, AND ATMOSPHERIC VACUUM BREAKER PER WALLA WALLA STANDARD PLAN 5-5. INSTALL IRRIGATION CONTROL VALVES PER IRRIGATION PLANS.
16. PAINTED CROSSWALK, SEE WSDOT STANDARD PLAN M-15.10-01.
17. DI WATER MAIN, 16" DIA CLASS 50 PER WALLA WALLA STANDARD PLAN 4-1. MECHANICALLY RESTRAIN ALL JOINTS.
18. CONNECT TO EXISTING WATER MAIN.
19. INSTALL MJ GATE VALVE ON EXISTING 16" TEE/16" DI PIPE.
20. FLxMJ 90 DEGREE BEND AND FLxMJ 11.25 DEGREE BEND AND THRUST BLOCK.
21. MJ 22.5 BEND AND THRUST BLOCK.
22. REINSTALL EXISTING SIGNS ON NEW POST PER WALLA WALLA STANDARD PLAN 1-7.
23. LIGHT POLE TO BE RELOCATED BY OTHERS.

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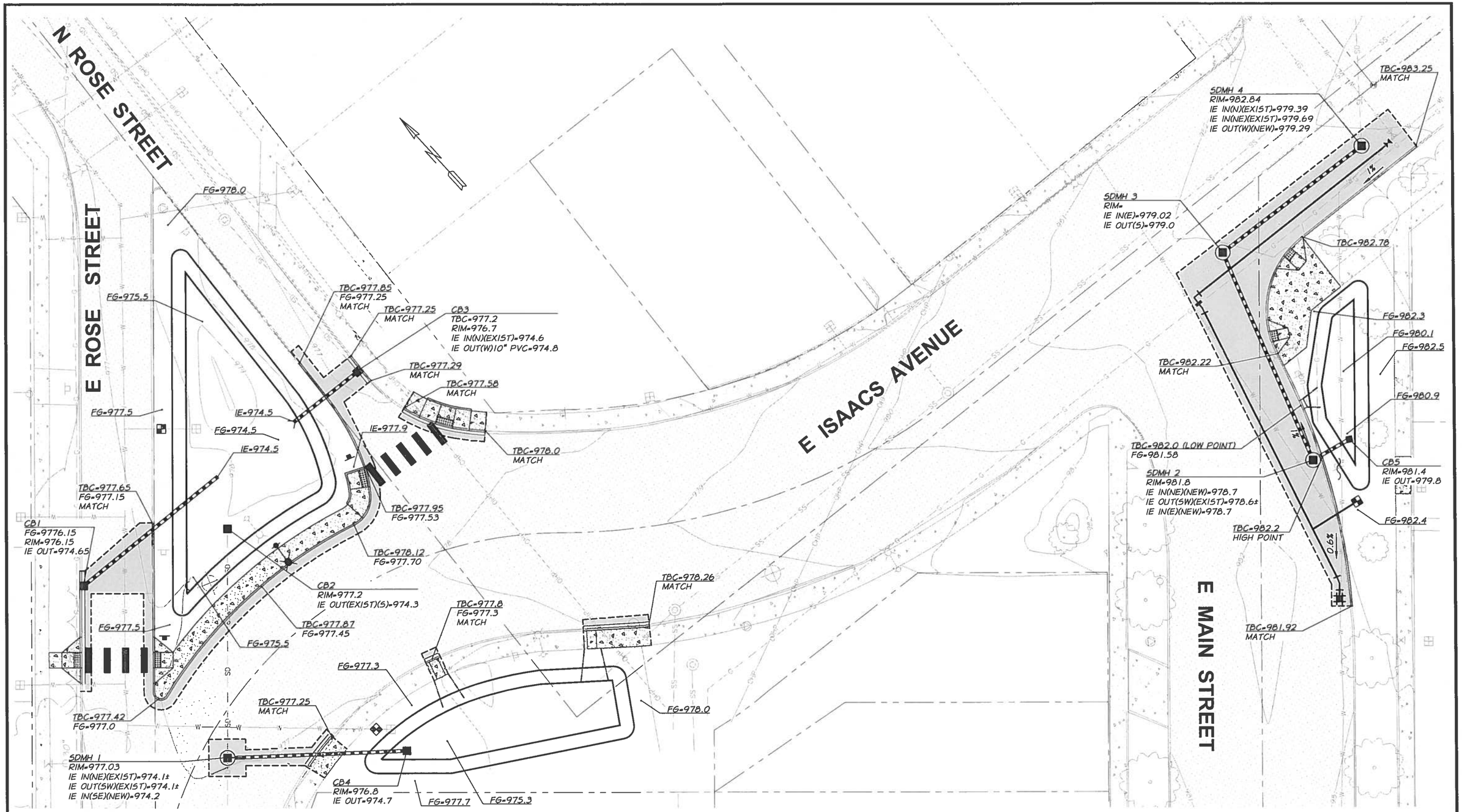
SITE PLAN

SHEET
C-102
OF __



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GRADING PLAN

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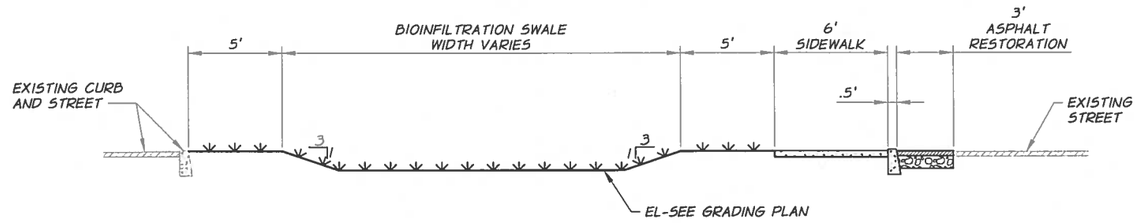
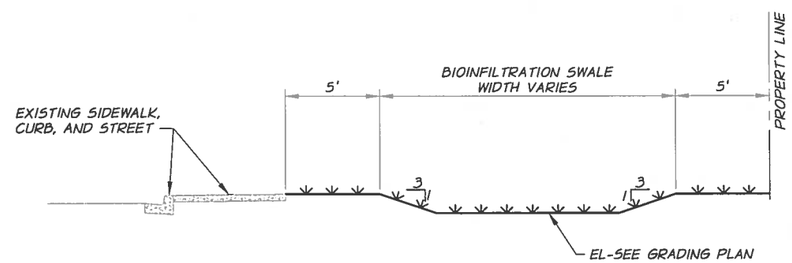


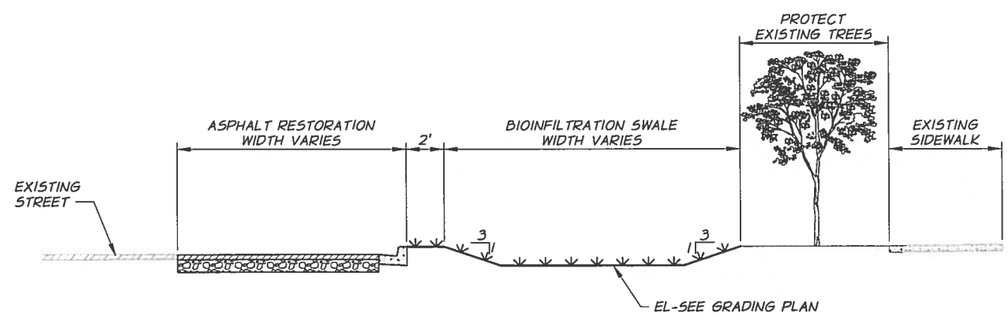
A / C-102 SWALE 1 CROSS SECTION

NTS



B / C-102 SWALE 2 CROSS SECTION

NTS



C / C-102 SWALE 3 CROSS SECTION

NTS

JOSEPH M. MELDER JR.
STATE OF WASHINGTON
49109
REGISTERED
PROFESSIONAL ENGINEER

REVISION	BY	DATE	HORZ. SCALE	VERT. SCALE
DESIGNED BY J. MELDER			JOB NUMBER 359-131-060	DATE JULY 23 2014
DRAWN BY D. LUTTON			ACAD FILE 359-133-060C-301ISC.dwg	
REVIEWED BY A. SCHMIDTGALL			COPYRIGHT 2014 BY ANDERSON PERRY & ASSOCIATES, INC.	

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WALLA WALLA, WA. LA GRANDE, OR.

CITY OF WALLA WALLA
STORMWATER LOW IMPACT DEVELOPMENT (LID) PROJECTS
ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

TYPICAL SECTIONS

SHEET
C-301
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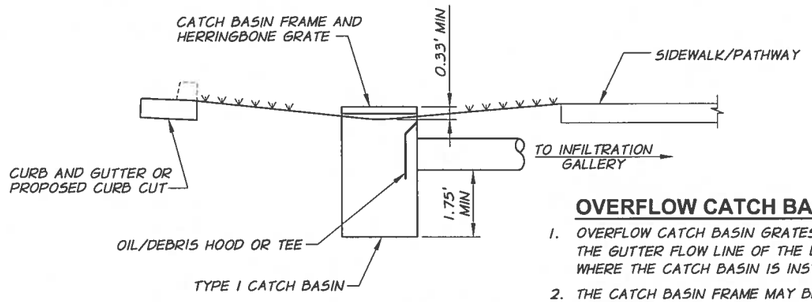


OVERFLOW CATCH BASIN

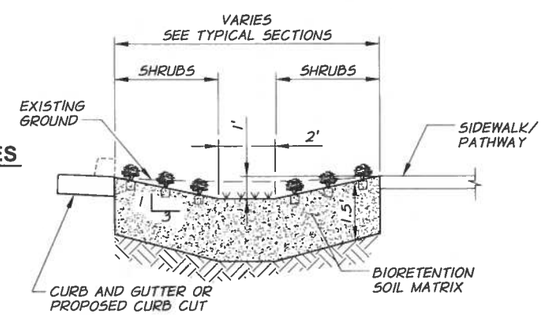
NTS

OVERFLOW CATCH BASIN NOTES

1. OVERFLOW CATCH BASIN GRATES SHALL BE INSTALLED 3" BELOW THE GUTTER FLOW LINE OF THE LOWEST CURB CUT IN THE SWALE WHERE THE CATCH BASIN IS INSTALLED.
2. THE CATCH BASIN FRAME MAY BE INSTALLED WITH THE FLANGE UP OR DOWN AS NECESSARY TO ACHIEVE THE DESIRED RIM ELEVATION.
3. INSTALL OIL/DEBRIS HOOD ON EXISTING AND NEW CATCH BASINS, OR TEE ON NEW CATCH BASINS THAT DISCHARGE TO DRYWELLS.

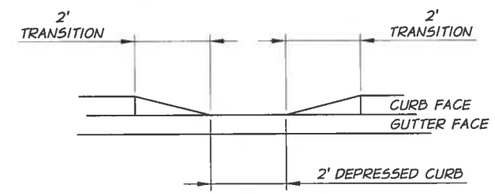
BIO-INFILTRATION SWALE NOTES

1. SEE LANDSCAPE AND IRRIGATION PLANS FOR SPECIFIC LANDSCAPE AND IRRIGATION.
2. CONSTRUCT CURB CUT WITH ROCK OUTFALL AT LOCATIONS SHOWN ON PLANS.
3. SCARIFY THE SOIL AS DESCRIBED IN THE SPECIFICATIONS PRIOR TO PLACEMENT OF THE BIORETENTION SOIL MATRIX.

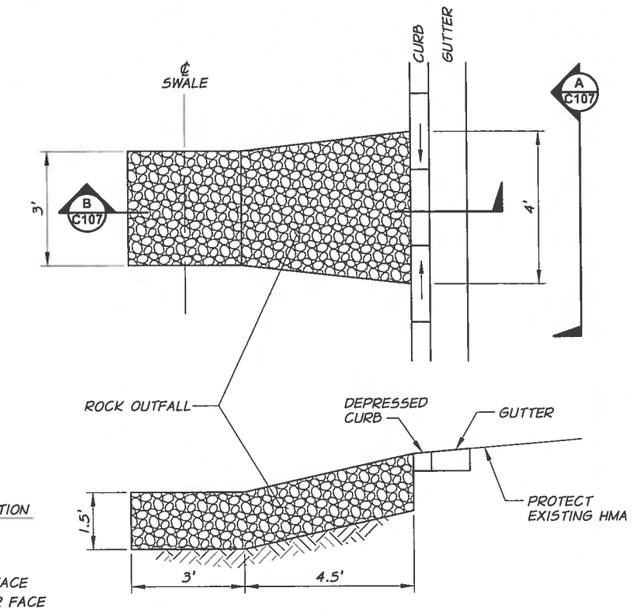


BIO-INFILTRATION SWALE - 8' WIDE

NTS



A C107 **SECTION**



B C107 **SECTION**

CURB CUT DETAIL

NTS

CURB CUT NOTE

1. ROCK OUTFALL SHALL CONSIST OF QUARRY SPALLS, BOTTOM AND SIDES TO BE WRAPPED WITH GEOTEXTILE FABRIC THAT MEETS WSDOT SPEC. 9-33 FOR UNDERGROUND DRAINAGE FABRIC.

JOSEPH M. MELDER JR.
STATE OF WASHINGTON
49109
REGISTERED
PROFESSIONAL ENGINEER

REVISION	BY	DATE

DESIGNED BY J. MELDER
DRAWN BY D. LUTTON
REVIEWED BY A. SCHMIDTGALL

HORZ. SCALE | VERT. SCALE
JOB NUMBER 359-131-060 | DATE JULY 23 2014
ACAD FILE: 359-133-060C-501ISC.dwg

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ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

STORM DRAIN AND MISCELLANEOUS DETAILS

SHEET
C-501
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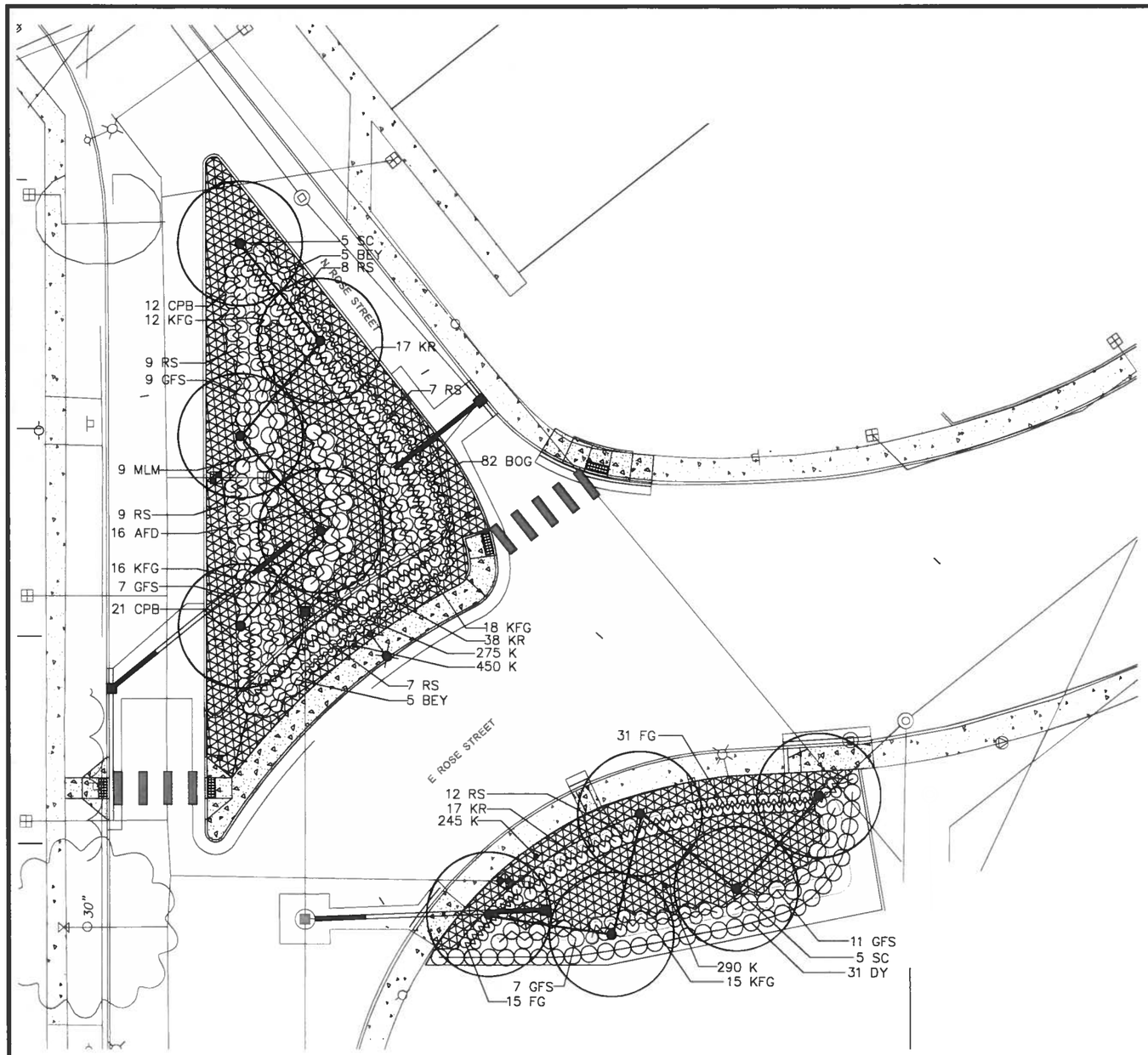

LANDSCAPE LEGEND

SYMBOL	COMMON NAME / BOTANICAL NAME	COMMENTS	SIZE/COND.	SPACING
TREES				
SC	Sargent Cherry Prunus sargentii	6' branching	2.5" cal.	30' o.c.
SHRUBS/GRASSES				
AFD	Artic Fire Dogwood Cornus sericea 'Artic Fire'		3 Gal.	4' o.c.
BEY	Bright Edge Yucca Yucca filamentosa 'Bright Edge'		5 Gal.	3' o.c.
BOG	Blue Oat Grass Helictotrichon sempervirens 'Sapphire'		1 Gal.	2' o.c.
CPB	Crimson Pygmy Barberry Berberis thunbergii 'Crimson Pygmy'		3 Gal.	3' o.c.
DY	Dense Yew Taxus x media 'Densiformis'		18"–24"	4' o.c.
FG	Fountain Grass Pennisetum alopecuroides 'Hamelin'		1 Gal.	2.5' o.c.
MLM	Morning Light Miscanthus Miscanthus sinensis 'Morning Light'		1 Gal.	4' o.c.
GFS	Goldflame Spirea Spiraea x bumalda 'Goldflame'		3 Gal.	3.5' o.c.
KFG	Karl Foerster Feather Reed Grass Calamagrostis x acutiflora 'Karl Foerster'		1 Gal.	3' o.c.
KR	Pink Knockout Rose Rosa 'Radcon' PPAF		1 Gal.	3' o.c.
LB	Little Blue Stem Schizachyrium scoparium		1 Gal.	2.5' o.c.
RS	Russian Sage Perovskia atriplicifolia		3 Gal.	3' o.c.
GROUNDCOVER				
K	Kinnininnick Arctostaphylos uva ursi 'Massachusetts'		1 Gal.	24" o.c.

LANDSCAPE NOTES

1. Receive approval of sub grade by Engineer prior to placement of bio retention topsoil.
2. Provide required bio retention topsoil submittals to Engineer for approval prior to delivery on site and installation.
3. Deposit minimum 18 inch layer of approved bio retention topsoil in all landscape areas.
4. Install irrigation and receive approval of completed installation by Engineer prior to any planting.
5. Receive approval of finish landscape grades by Engineer prior to any planting.
6. Submit representative sample of each proposed plant material for use on project to Engineer for approval prior to any planting. Submit on project site.
7. Layout and stake all landscape plantings for review and approval by Engineer prior to planting.
8. Provide specified tree root control barrier whenever edge of root ball is within 5' of any curb, sidewalk or utility line.

CHRISTOPHER FRESHLEY
LANDSCAPE ARCHITECT
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(E-MAIL): FRESHLEY@QWESTOFFICE.NET

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
CHRISTOPHER FRESHLEY
CERTIFICATE NO. 346

REVISION	BY	DATE
DESIGNED BY CF		
DRAWN BY CF		
REVIEWED BY CJF		

15 0 15 30 45
SCALE IN FEET

HORZ. SCALE | VERT. SCALE
JOB NUMBER 359-131-060 | DATE JULY 21 2014
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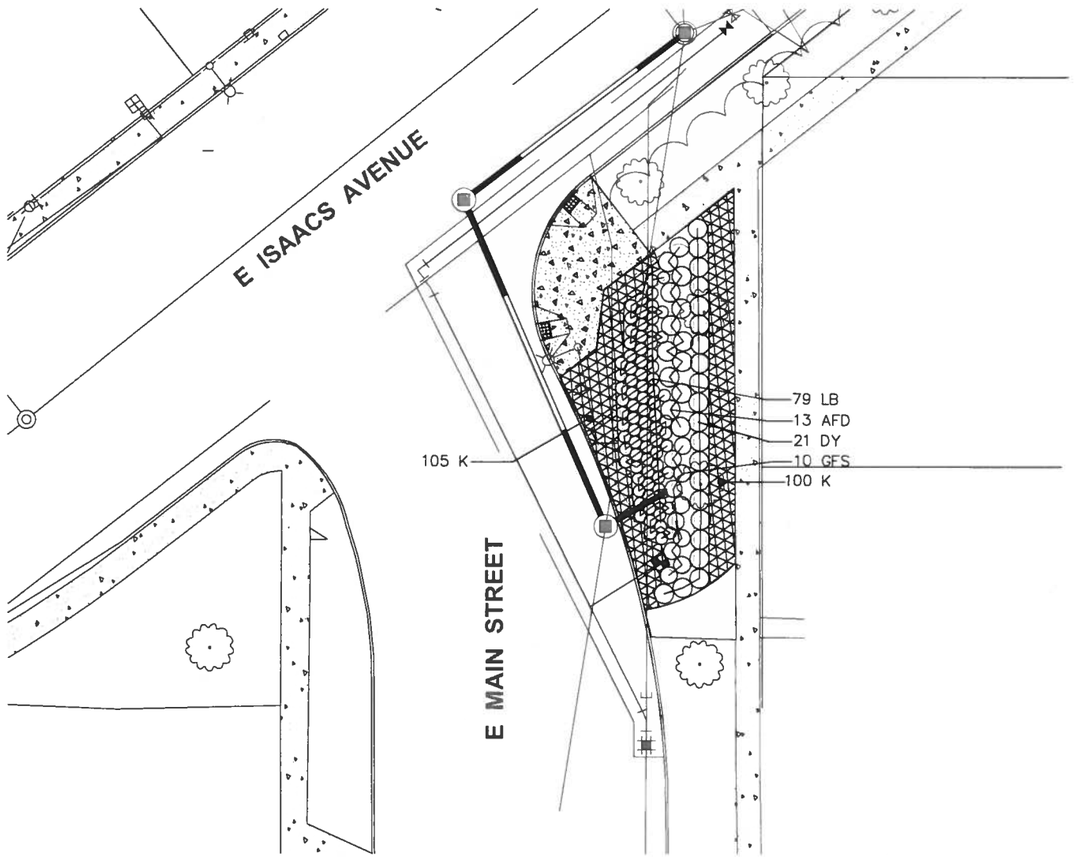
STORMWATER LOW IMPACT DEVELOPMENT (LID) PROJECTS
ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

Landscape Plan

SHEET 101 L-2 OF __



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CHRISTOPHER FRESHLEY
CERTIFICATE NO. 346

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DESIGNED BY CF		
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REVIEWED BY CJF		

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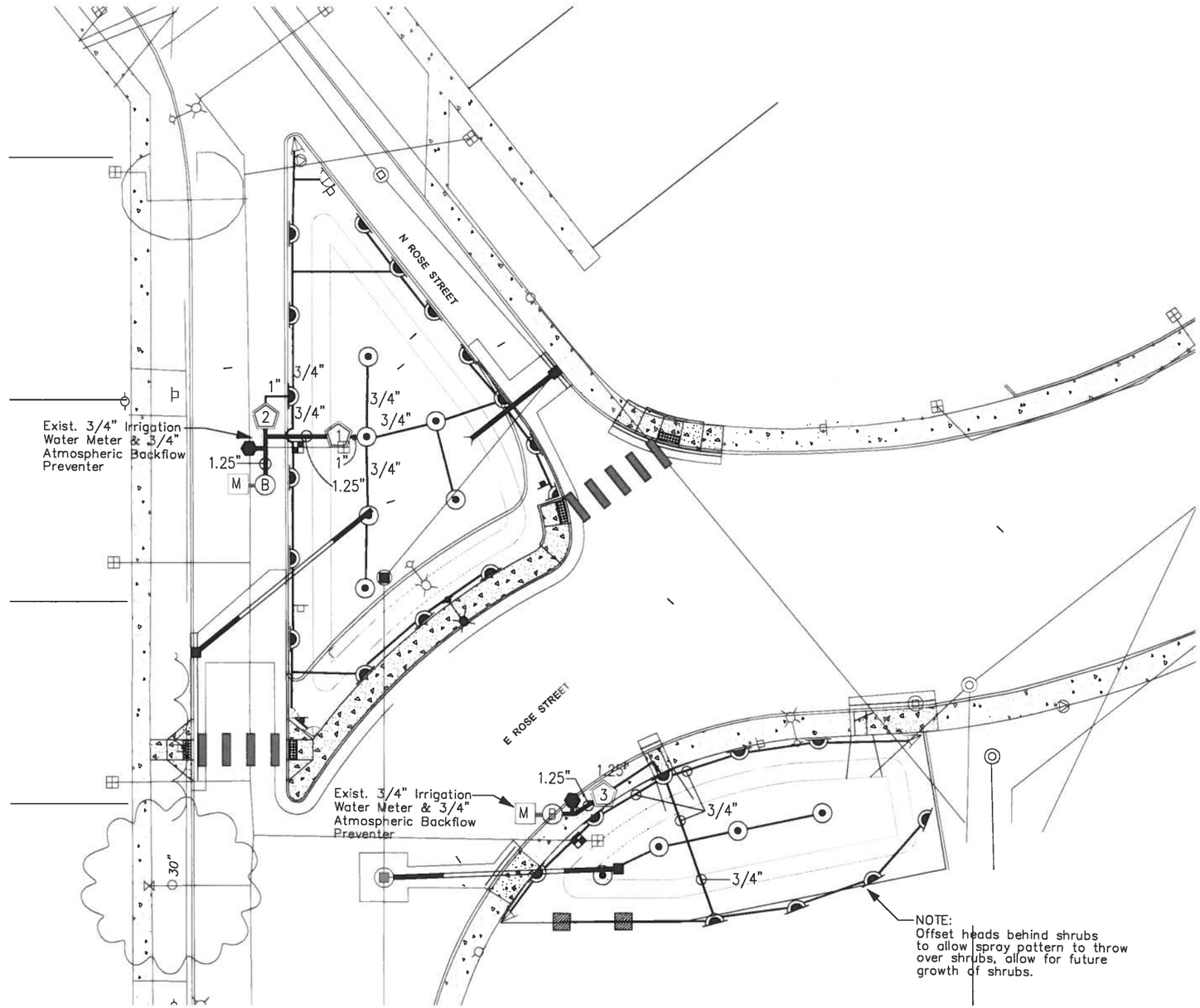
STORMWATER LOW IMPACT DEVELOPMENT (LID) PROJECTS
ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

Landscape Plan

SHEET 102 L-2 OF __



IRRIGATION LEGEND

SPRINKLER HEAD LEGEND

SYMBOL	PATTERN	COVERAGE	GPM	MANUF. & CATALOG NO.
■	Side Strip	5'x30'	.44	Hunter MPSS530
◩	Right/Left Strip	5'X15'	.22	Hunter MPLCS and MPRCS-S15
◺	45-105	8'-15'	.19	Hunter MPCorner
◿	90-210	8'-15'	.19	Hunter MP1000-90
◠	90-210	8'-15'	.37	Hunter MP1000-180
⊕	360	8'-15'	.75	Hunter MP1000-360
◺	Quarter	13'-21'	.40	Hunter MP2000-90
◠	Half	13'-21'	.74	Hunter MP2000-180
⊙	360	13'-21'	1.47	Hunter MP2000-360
◺	Quarter	22'-30'	.86	Hunter MP3000-90
◠	Half	22'-30'	1.82	Hunter MP3000-180
●	360	22'-30'	3.64	Hunter MP3000-360

NOTES:
1. Static Pressure = 100 psi
2. Design Pressure = Spray Heads = 30 psi
3. Shrub Heads - HUNTER PROS-06-PRS40
   Groundcover Heads - HUNTER PROS-12-PRS40
   NOTE: Refer to landscape plan for location of Groundcover areas.

GENERAL EQUIPMENT LEGEND

- Class 200 PVC pipe for lateral lines, bury minimum 18 inches.
- Exist. Irrigation Line, Field verify size and location.
- SCH 40 PVC pipe for supply lines, bury minimum 18 inches.
- [M] Exist. 3/4" Irrigation Water Meter - Field Verify
- [M] New 3/4" Water Meter
  See City of Walla Walla Standard Plan No. 4-3.
- (B) Exist. 3/4" Atmospheric Vacuum Breaker - Field Verify
- (B) Wilkins 3/4" 350XL Double Check Valve Assembly
  See City of Walla Walla Standard Plan No. 5-3.
- (2) Toro Model P2202604 1" Electric Remote Control Valve and Valve Number.
  Toro Model P2202606 1.5" Electric Remote Control Valve and Valve Number.
  NOTE: Provide Toro Model DDCWP29V & DDCWP49V Battery Controller with DCLS-P matchiing solenoid as required.
- ⬢ Rainbird Model 44 LRC 1" Quick Coupler

CONTROL VALVE KEY

Control Valve Number	1	2	3	4
Gallons Per Minute	11	10	14	9
Control Valve Size	1"	1"	1"	1"

GENERAL NOTES

1. This plan is schematic. Place all piping, valves, equipment, etc. shown in paved areas in planting beds wherever possible and inside ROW between curb and sidewalk.
2. Place sleeving where required prior to asphalt/concrete work. Co-ordinate with other trades. Schedule 40 PVC pipe for sleeves under parking, driveways, and public sidewalks. Size as shown on plans. Torpedo new sleeves under existing streets and driveways.
3. Verify the correlation between ground measurements and drawings prior to any work. Notify the Owner's representative of any discrepancies immediately.
4. Make field adjustments as required. The contractor shall not willfully install the irrigation system as per drawing when it is obvious in the field that conditions vary from the drawings.
5. Verify the water pressure at the point of connection, submit test results to the Engineer for approval prior to any work.
6. Co-ordinate head locations with shrubs and groundcover to insure complete coverage.
7. The entire installation of the irrigation system shall fully comply with all local and state laws and ordinances.
8. The Contractor shall be responsible for all permits and arrange for all necessary inspections and will pay fees associated with this project.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

CHRISTOPHER FRESHLEY
CERTIFICATE NO. 346

CHRISTOPHER FRESHLEY
LANDSCAPE ARCHITECT
1020 S.W. TAYLOR SUITE 864 • PORTLAND, OREGON 97205 • 503/223-2821
(E-MAIL): FRESHLEYS@QWESTOFFICE.NET

REVISION	BY	DATE

DESIGNED BY CF
DRAWN BY CF
REVIEWED BY CJF

15 0 15 30 45
SCALE IN FEET

HORZ. SCALE | VERT. SCALE
JOB NUMBER 359-131-060 | DATE JULY 19 2014
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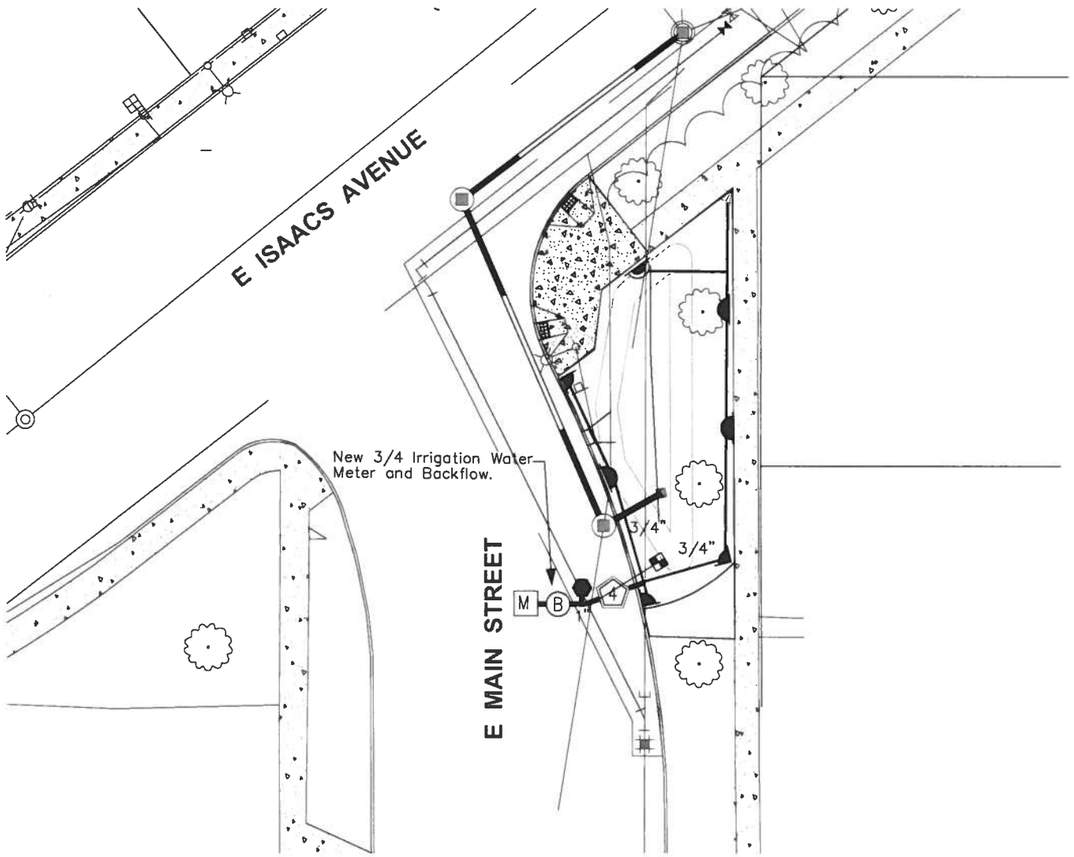
STORMWATER LOW IMPACT DEVELOPMENT (LID) PROJECTS
ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

Irrigation Plan

SHEET 103 L-5 OF __



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CHRISTOPHER FRESHLEY
CERTIFICATE NO. 346

REVISION	BY	DATE
DESIGNED BY CF		
DRAWN BY CF		
REVIEWED BY CJF		

15 0 15 30 45
SCALE IN FEET

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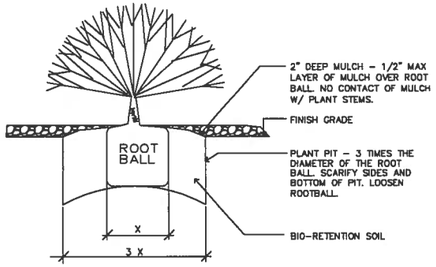
ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

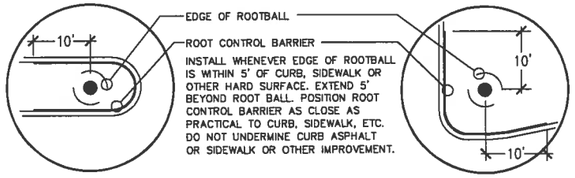
Irrigation Plan

SHEET 104 ~~L-6~~ OF __

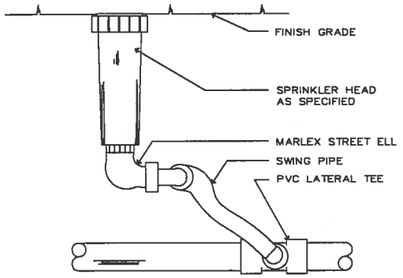


NOTE: TOP OF SHRUB ROOT BALL TO BE FLUSH WITH OR 1/2" ABOVE FINISH SOIL GRADE.

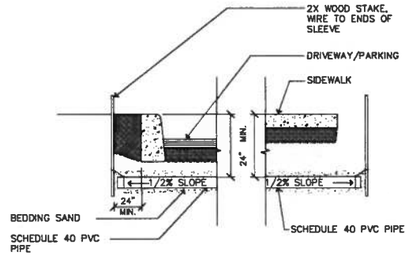
1 SHRUB PLANTING
SCALE: NTS



4 ROOT CONTROL BARRIER
SCALE: NTS



7 POP-UP SPRINKLER
SCALE: NTS



10 SLEEVE
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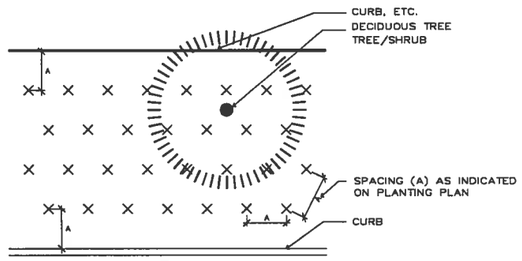
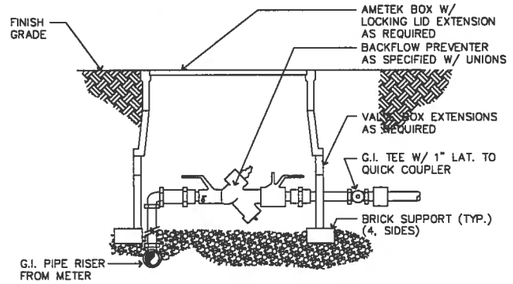
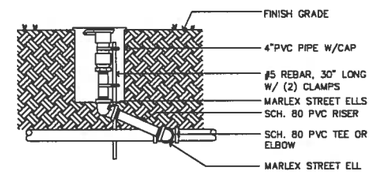


2 SHRUB/GRASSES/GROUNDCOVER SPACING
SCALE: :NTS



NOTE: THIS INSTALLATION DETAIL MUST COMPLY WITH ALL LOCAL AND STATE CODES. LANDSCAPE CONTRACTOR MUST VERIFY CORRECT INSTALLATION WITH LOCAL WATER JURISDICTION.

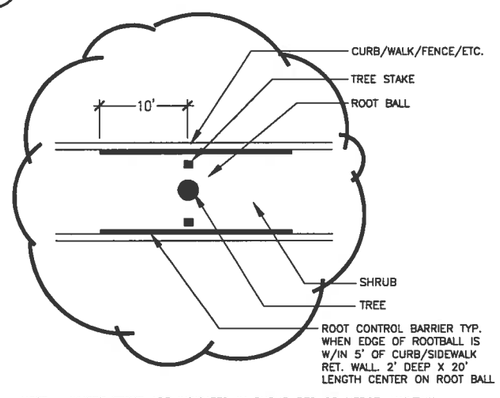
5 BACKFLOW PREVENTION DEVICE
SCALE: NTS



8 QUICK COUPLER
SCALE: NTS

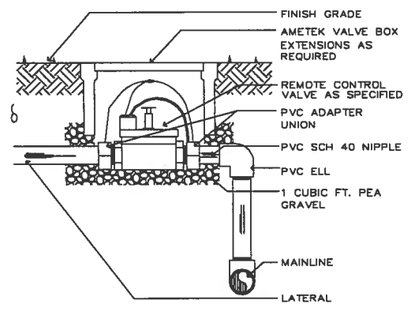
GALLON PER MINUTE		PIPE SIZE & CLASS	
0 – 10	GALLONS	3/4"	CLASS 200
11 – 15	GALLONS	1"	CLASS 200
16 – 25	GALLONS	1 1/4"	CLASS 200
26 – 40	GALLONS	1 1/2"	CLASS 200
41 – 55	GALLONS	2"	CLASS 200
56 – 85	GALLONS	2 1/2"	CLASS 200
86 – 125	GALLONS	3"	CLASS 200

11 PIPE SIZE SCHEDULE – Lateral Lines
SCALE: NTS

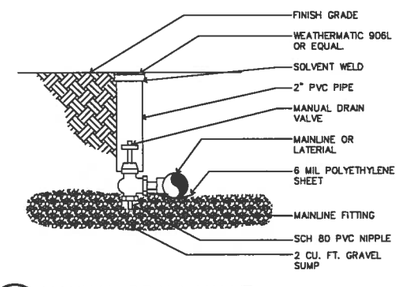


NOTE – WHERE TREES ARE INDICATED IN SHRUB BED OR HEDGE, MAINTAIN SHRUB SPACING INDICATED. OFFSET TREE STAKES AS REQUIRED.

3 TREE STAKING DETAIL
SCALE: NTS



6 ELECTRIC VALVE ASSEMBLY W/ BATTERY CONTROLLER AND LATCHING SOLENOID
SCALE: NTS



9 MANUAL DRAIN VALVE
SCALE: NTS

GALLON PER MINUTE		PIPE SIZE & CLASS	
0 – 8	GALLONS	3/4"	SCH. 40
9 – 13	GALLONS	1"	SCH. 40
14 – 20	GALLONS	1 1/4"	SCH. 40
21 – 30	GALLONS	1 1/2"	SCH. 40
31 – 50	GALLONS	2"	SCH. 40
51 – 70	GALLONS	2 1/2"	SCH. 40
71 – 110	GALLONS	3"	SCH. 40

12 PIPE SIZE SCHEDULE – Supply Lines
SCALE: NTS

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

CHRISTOPHER FRESHLEY
CERTIFICATE NO. 346

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LANDSCAPE ARCHITECT
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REVISION	BY	DATE

DESIGNED BY CF	
DRAWN BY CF	
REVIEWED BY CJF	

HORZ. SCALE	VERT. SCALE
JOB NUMBER 359-131-060	DATE JULY 19 2014
ACAD FILE:	

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THIS DRAWING HAS BEEN REDUCED APPROXIMATELY 50%. ADJUST SCALE ACCORDINGLY. BAR SCALE SHOWN IS ACCURATE.

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engineering surveying natural resources
WALLA WALLA, WA. LA GRANDE, OR.

CITY OF WALLA WALLA
STORMWATER LOW IMPACT DEVELOPMENT (LID) PROJECTS
ISAACS AVENUE AND ROSE STREET INTERSECTION
2014

Landscape & Irrigation Details

SHEET 105 ~~L-7~~ OF __