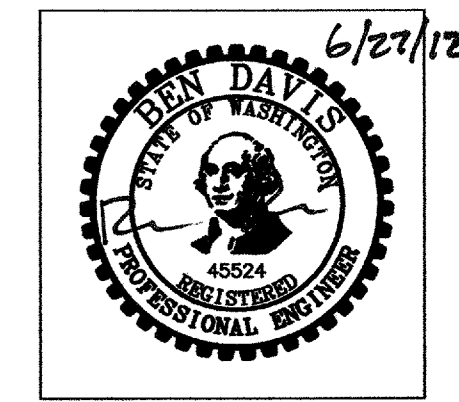




DAVID EVANS AND ASSOCIATES INC. 1620 W. Marine View Drive, Suite 200 Everett Washington 98201 Phone: 425.259.4099



LINCOLN CREEK TRANSPORTATION CENTER

800 & 820 LINCOLN STREET

STORMWATER MODIFICATIONS

PR0001765

SCOPE OF WORK:

IMPROVE EXISTING DRAINAGE SYSTEM AT ENTRANCE TO PARKING LOT BY REPLACING AND REGRADING 4,980 SF OF EXISTING ASPHALT PAVEMENT AND INSTALLING NEW CATCH BASINS AND STORMFILTER.

REV	DATE	DESCRIPTION	BY	APRV

PROJECT TEAM

CLIENT: WESTERN WASHINGTON UNIVERSITY
915 26TH STREET
BELLINGHAM, WA 98225
Tel. 360.650.6813
Fax 360.650.2898

CIVIL ENGINEERS, PLANNERS, LANDSCAPE, AND ENVIRONMENTAL: DAVID EVANS AND ASSOCIATES, INC.
1620 W. MARINE VIEW DRIVE, SUITE 200
EVERETT, WA 98201
Tel. 425.259.4099
Fax 425.259.3230

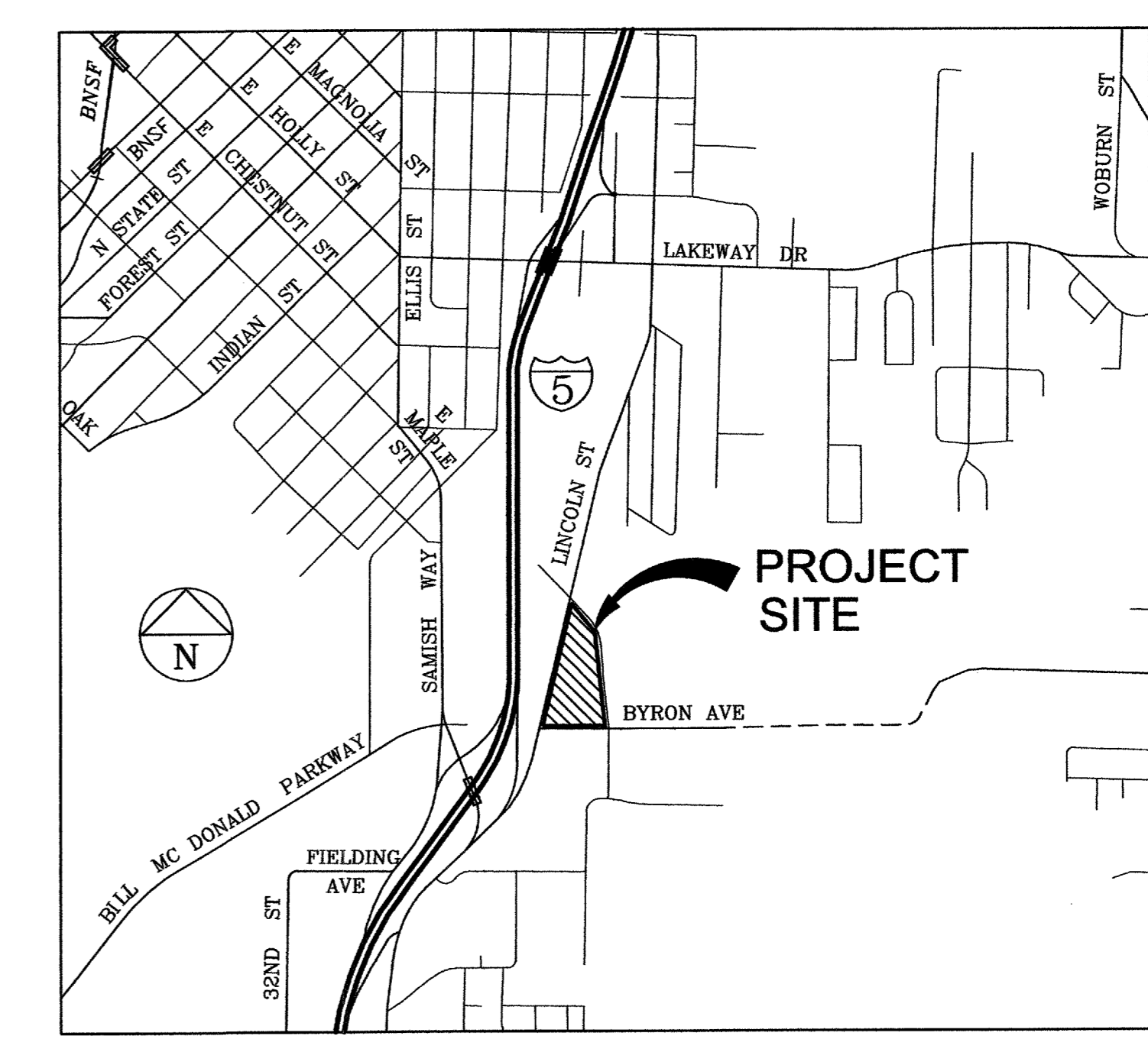
DRAWING INDEX

SHEET NO.	DRAWING TITLE
C0	COVER SHEET
CIVIL	
C1	SITE MAP
C2	DEMOLITION & SWPPP
C3	SWPPP NOTES & DETAILS
C4	GRADING, PAVING & DRAINAGE PLAN
C5	GRADING, PAVING & DRAINAGE NOTES & DETAILS
C6	GRADING, PAVING & DRAINAGE NOTES & DETAILS

CITY OF BELLINGHAM GENERAL NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AND THE CITY OF BELLINGHAM DEVELOPMENT GUIDELINES AND IMPROVEMENT STANDARDS.
- PUBLIC RIGHTS-OF-WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE CONDITION AT ALL TIMES. IN THE EVENT THAT MATERIALS ARE INADVERTENTLY DEPOSITED IN PUBLIC RIGHTS-OF-WAY, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEEPED AND REMOVED PRIOR TO ANY STREET WASHING. PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION AND SEDIMENTATION. FAILURE TO MEET THESE REQUIREMENTS MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING AS-BUILT INFORMATION. AS-BUILT DRAWINGS SHALL INCLUDE THE EXACT LOCATION OF ALL UNDERGROUND AND ABOVE-GROUND UTILITIES. UPON COMPLETION OF THE PROJECT, THESE AS-BUILT DRAWINGS SHALL BE GIVEN TO THE PROJECT ENGINEER FOR INCORPORATION INTO THE PROJECT'S RECORD DRAWINGS.
- UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN THE AREA OF CONSTRUCTION. THE LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY OWNERS FOR LOCATIONS AND TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS 811. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES THROUGHOUT CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROMPTLY NOTIFY THE ENGINEER OF ANY CONFLICT WITH EXISTING UTILITIES. ALL EXISTING FACILITIES, LANDSCAPE IMPROVEMENTS, AND UTILITIES NOT SPECIFICALLY IDENTIFIED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT CONSTRUCTION OR RESTORED AT COMPLETION OF THE WORK.

VICINITY MAP



SCALE: 1" = 1000'



LINCOLN CREEK TRANS CENTER STORMWATER MODIFICATIONS COVER SHEET	Client Review	Renovation Review	Approved by
	Designed by BRD	Project Manager JNS	Date 6-27-2012
	Maintenance Review	Drawn by CLK	

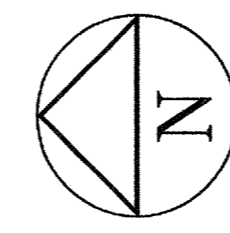
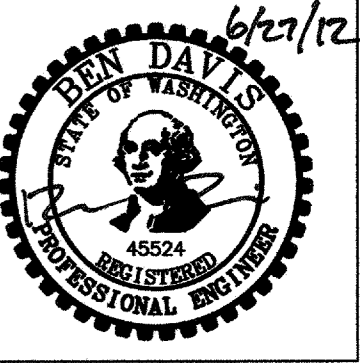
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Sheet #	1 of 7
	C0
Job Number	PR0001765
Microfile Number	N4940

ASBUILT DRAWING

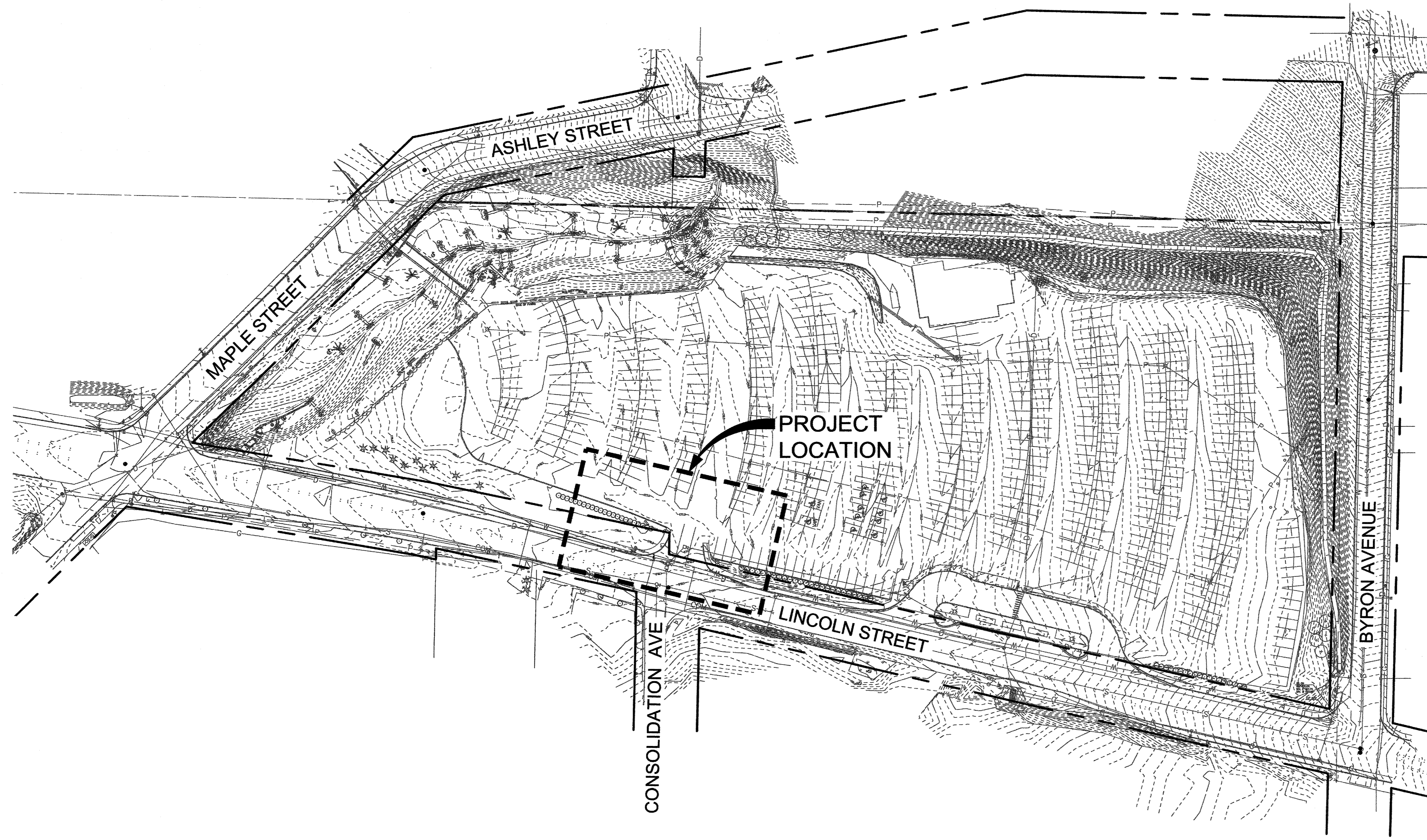


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Everett Washington 98201
Phone: 425.259.4099

Att-20B



0 60 120
SCALE IN FEET



SITE MAP

REV	DATE	DESCRIPTION	BY	APRV



LINCOLN CREEK TRANS CENTER			
STORMWATER MODIFICATIONS			
SITE MAP			
Client Review	Maintenance Review	Planning Review	Design Review
Designed by BRD	Drawn By CLK	Approved by JNS	Date 6-27-2012

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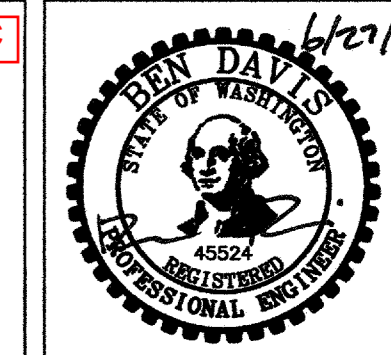
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Sheet #	2 of 7
	C1
Job Number	PR0001765
Microfile Number	N4941

ASBUILT DRAWING



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Everett Washington 98201
Phone: 425.259.4099

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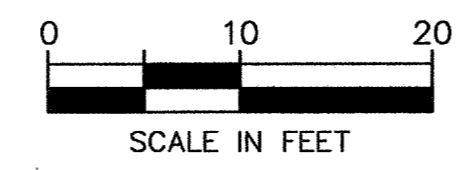
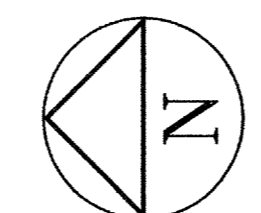
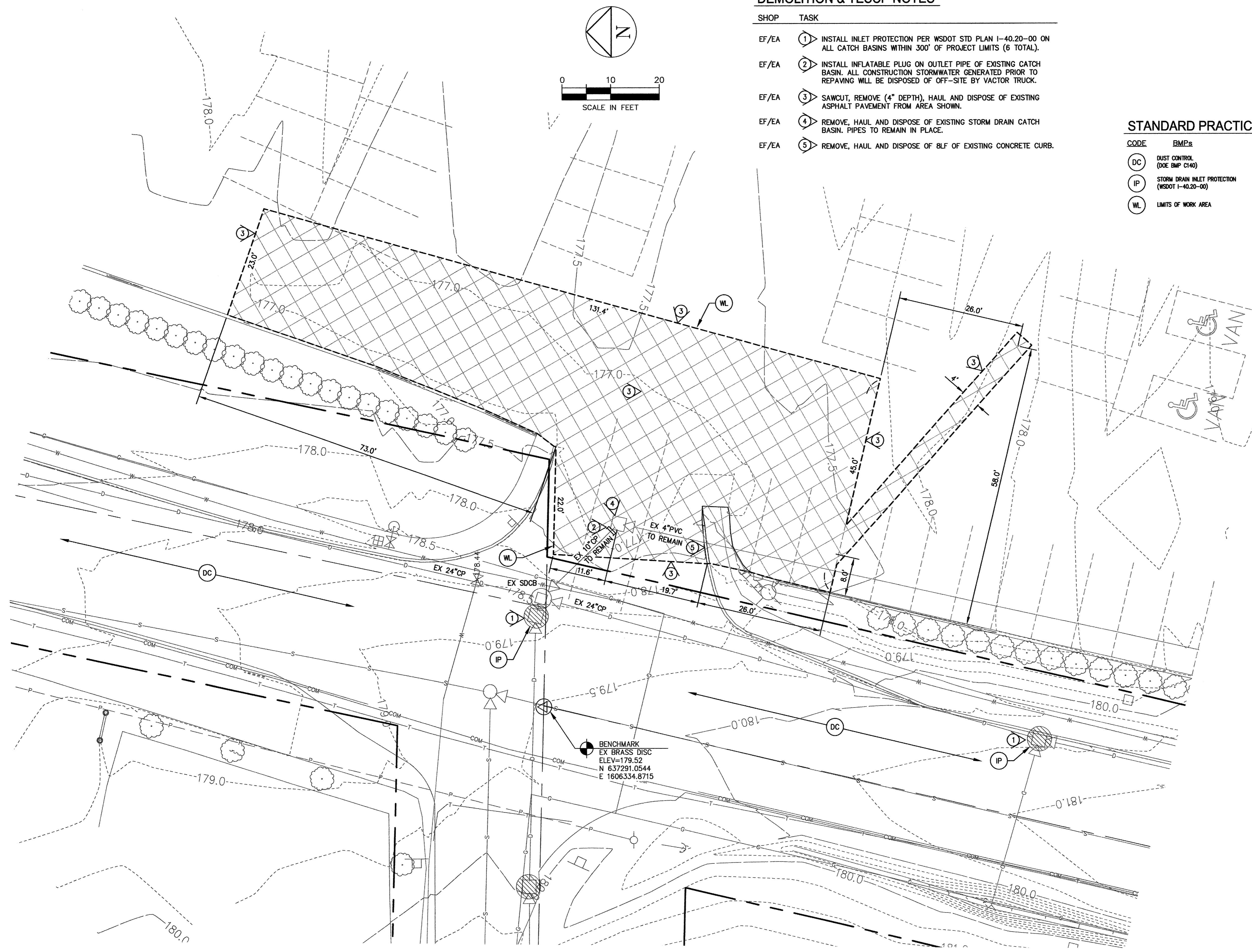


DEMOLITION & TESCP NOTES

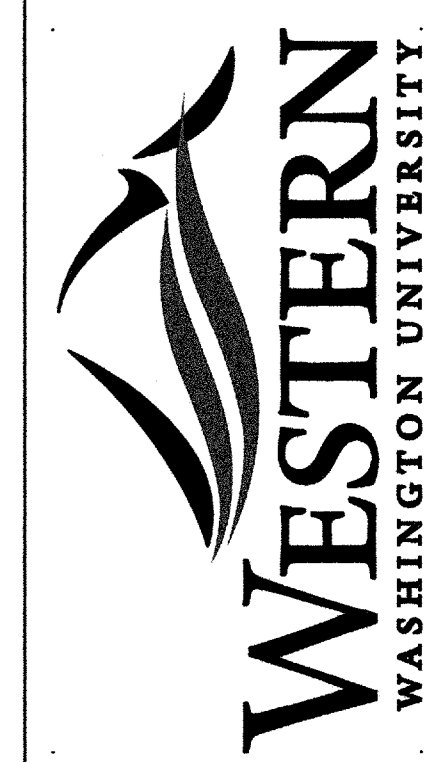
- | SHOP | TASK |
|-------|---|
| EF/EA | 1 INSTALL INLET PROTECTION PER WSDOT STD PLAN I-40.20-00 ON ALL CATCH BASINS WITHIN 300' OF PROJECT LIMITS (6 TOTAL). |
| EF/EA | 2 INSTALL INFLATABLE PLUG ON OUTLET PIPE OF EXISTING CATCH BASIN. ALL CONSTRUCTION STORMWATER GENERATED PRIOR TO REPAVING WILL BE DISPOSED OF OFF-SITE BY VACTOR TRUCK. |
| EF/EA | 3 SAWCUT, REMOVE (4" DEPTH), HAUL AND DISPOSE OF EXISTING ASPHALT PAVEMENT FROM AREA SHOWN. |
| EF/EA | 4 REMOVE, HAUL AND DISPOSE OF EXISTING STORM DRAIN CATCH BASIN. PIPES TO REMAIN IN PLACE. |
| EF/EA | 5 REMOVE, HAUL AND DISPOSE OF 8LF OF EXISTING CONCRETE CURB. |

STANDARD PRACTICE CODING SYSTEM:

- | CODE | BMPs |
|------|---|
| DC | DUST CONTROL (DOE BMP C140) |
| IP | STORM DRAIN INLET PROTECTION (WSDOT I-40.20-00) |
| WL | LIMITS OF WORK AREA |



REV	DATE	DESCRIPTION	BY	APRV



LINCIN CREEK TRANS CENTER		Design Review	Date
STORMWATER MODIFICATIONS		Planning Review	6-27-2012
Maintenance Review	Drawn By	Approved By	JNS
Client Review	BRD	CLK	

Building/Zone	LC
Sheet #	3 of 7
	C2
Job Number	PR0001765
Microfile Number	N4942

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ASBUILT DRAWING

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

THIS STORMWATER POLLUTION PREVENTION PLAN IS PROVIDED IN ACCORDANCE WITH THE TERMS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR CONSTRUCTION ACTIVITIES FOR THIS PROJECT. THE CONTRACTOR IS ADVISED THAT THE PROJECT AREA DRAINS TO WETLANDS AND/OR STATE WATERS AND THAT THE CONTRACTOR IS RESPONSIBLE TO PROTECT THE RECEIVING WATERS FROM DELETERIOUS EFFECTS OF CONSTRUCTION.

THE CONTRACTOR IS REQUIRED TO HAVE A COPY OF THE SWPPP ON SITE AT ALL TIMES. THIS PLAN AND ACCOMPANYING SHEETS CONSTITUTE THE SWPPP.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE EROSION CONTROL MEASURES SHOWN OR DESCRIBED IN THE CONTRACT DOCUMENTS AND ANY ADDITIONAL MEASURES THAT MAY BE REQUIRED BY THE CONTRACTORS MEANS AND METHODS OF CONSTRUCTION AS NEEDED TO CONTROL EROSION AND SEDIMENT AT THE CONSTRUCTION SITE AND TO PREVENT VIOLATION OF SURFACE WATER QUALITY, GROUND WATER QUALITY, OR SEDIMENT MANAGEMENT STANDARDS. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED EARTH IS STABILIZED IN FINISH GRADES.

THE FOLLOWING DESCRIBES HOW THE CONSTRUCTION SWPPP ADDRESSES EACH OF THE 12 REQUIRED ELEMENTS REFER TO THESE PLANS FOR DRAWINGS OF THE PROJECT, VICINITY MAP, SITE MAP, CONVEYANCE SYSTEMS, EROSION AND SEDIMENT CONTROL MEASURES, AND EROSION AND SEDIMENT CONTROL DETAILS.

ELEMENT #1: PRESERVE VEGETATION/MARK CLEARING LIMITS

1. 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.
2. SILT FENCE, GEOTEXTILE ENCASED BARRIERS, CONSTRUCTION FENCE, ORANGE PLASTIC FENCE, OR OTHER APPROVED MEASURES MAY BE USED TO MARK THE CLEARING LIMITS AT THE CONTRACTOR'S OPTION.
3. THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.

SUGGESTED BMPs/BMPs TO BE USED:
WORK AREA DEFINED BY SAWCUT LIMITS

ELEMENT #2: ESTABLISH CONSTRUCTION ACCESS

1. CONSTRUCTION VEHICLE ACCESS AND EXIT SHALL BE LIMITED TO ONE ROUTE. REFER TO SWPP PLAN OF THESE PLANS FOR THE CONSTRUCTION ENTRANCE LOCATION. ALL ACCESS/EXIT POINTS SHALL BE STABILIZED WITH QUARRY SPALLS, CRUSHED ROCK OR OTHER EQUIVALENT BMP, TO MINIMIZE THE TRACKING OF SEDIMENT ONTO PUBLIC ROADS.
2. IF THE STABILIZED CONSTRUCTION ENTRANCE IS NOT EFFECTIVE IN PREVENTING SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADS, WHEEL WASH OR TIRE BATHS SHALL BE LOCATED ON SITE.
3. IF SEDIMENT IS TRACKED OFF SITE, PUBLIC OR PRIVATE ROADS 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.
4. STREET WASHING IS ALLOWED ONLY AFTER SEDIMENT IS REMOVED AS DESCRIBED ABOVE. STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON SITE OR OTHERWISE BE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.

SUGGESTED BMPs/BMPs TO BE USED:
BMP C107: CONSTRUCTION ROAD/PARKING AREA STABILIZATION

ELEMENT #3: CONTROL FLOW RATES

1. 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 BMPs/BMPs TO BE USED:
NOT APPLICABLE

ELEMENT #4: INSTALL SEDIMENT CONTROLS

1. THE DUFF LAYER, NATIVE SOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE.
2. SEDIMENT CONTROL BMPs SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE BMPs SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
3. PRIOR TO LEAVING THE CONSTRUCTION SITE, STORMWATER RUNOFF FROM DISTURBED AREAS SHALL PASS THROUGH AN APPROPRIATE SEDIMENT REMOVAL BMP. RUNOFF FROM FULL STABILIZED AREAS MAY BE DISCHARGED WITHOUT A SEDIMENT REMOVAL BMP, BUT MUST MEET THE FLOW CONTROL PERFORMANCE STANDARD OF ELEMENT #3.

SUGGESTED BMPs/BMPs TO BE USED:
BMP C150: MATERIALS ON HAND
WSDOT STD PLAN I-40.20-00: INLET PROTECTION

ELEMENT #5: STABILIZE SOILS

1. EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY APPLICATION OF EFFECTIVE BMPs THAT PROTECT THE SOIL FROM EROSION FORCES OF RAINDROPS, FLOWING WATER, AND WIND.
2. 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.
3. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
4. 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.
5. APPLICABLE BMPs INCLUDE, BUT ARE NOT LIMITED TO: TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, SOIL APPLICATION OF POLYACRYLAMIDE (PAM), 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.
6. 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 BMPs/BMPs TO BE USED:
BMP C107: CONSTRUCTION ROAD/PARKING AREA STABILIZATION
BMP C150: MATERIALS ON HAND

ELEMENT #6: PROTECT SLOPES

1. 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).
2. OFF-SITE STORMWATER RUN-ON 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.
3. DO NOT CLEAR AND GRUB SLOPES GREATER THAN 4 (HORIZONTAL):1 (VERTICAL) UNLESS FURTHER WORK RESULTING IN STABILIZATION OF THE SLOPES TO BE CLEARED AND GRUBBED IS SCHEDULED.
4. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS.
5. CHECK DAMS SHALL BE PLACED AT REGULAR INTERVALS WITHIN CONSTRUCTED CHANNELS THAT ARE CUT DOWN A SLOPE.

SUGGESTED BMPs/BMPs TO BE USED:
NOT APPLICABLE

ELEMENT #7: PROTECT DRAIN INLETS

1. 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.
2. APPROACH ROADS SHALL BE KEPT CLEAN. SEDIMENT AND STREET WASH WATER SHALL NOT BE ALLOWED TO ENTER STORM DRAINS WITHOUT PRIOR AND ADEQUATE TREATMENT.
3. INLET PROTECTION DEVICES SHOULD BE CLEANED OR REMOVED AND REPLACED WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE (OR WHEN FILLED WITH SIX-INCHES OF SEDIMENT).

BMPs TO BE USED:
WSDOT STD PLAN I-40.20-00: INLET PROTECTION

ELEMENT #8: STABILIZE CHANNELS AND OUTLETS

1. ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PROTECT FROM THE EXPECTED PEAK 10 MINUTE VELOCITY OF FLOW FROM A TYPE 1A, 10-YR, 24-HR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YR, 1-HR FLOW RATE INDICATED BY AN APPROVED CONTINUOUS RUNOFF MODEL, INCREASED BY A FACTOR OF 1.6, MAY BE USED.
2. 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 BMPs/BMPs TO BE USED:
NOT APPLICABLE

ELEMENT #9: CONTROL POLLUTANTS

1. 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.
2. 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.
3. 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.
4. WHEEL WASH OR TIRE BATH WASTEWATER SHALL BE DISCHARGED TO A SEPARATE ON-SITE TREATMENT SYSTEM OR TO THE SANITARY SEWER WITH LOCAL SEWER DISTRICT APPROVAL.
5. APPLICATION OF FERTILIZERS AND PESTICIDES SHALL BE CONDUCTED IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICAL TO STORMWATER RUNOFF. MANUFACTURERS' LABEL REQUIREMENTS FOR APPLICATION RATES AND PROCEDURES SHALL BE FOLLOWED.
6. BMPs 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.
7. PERMITTEES SHALL OBTAIN WRITTEN APPROVAL FROM ECOLOGY PRIOR TO USING CHEMICAL TREATMENT, OTHER THAN CARBON DIOXIDE OR DRY ICE TO ADJUST pH.

SUGGESTED BMPs/BMPs TO BE USED:
BMP C152: SAWCUTTING & SURFACE POLLUTION PREVENTION
BMP C153: MATERIAL DELIVERY, STORAGE & CONTAINMENT

ELEMENT #10: CONTROL DEWATERING

1. 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 OR SEDIMENT POND.
2. 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 #6, 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.
3. OTHER DE-WATERING DISPOSAL OPTIONS MAY INCLUDE:
 - a) TRANSPORT OFF SITE IN A VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS.
 - b) ECOLOGY APPROVED ON-SITE CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES.
 - c) SANITARY SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, IF THERE IS NO OTHER OPTION.
 - d) USE OF A SEDIMENTATION BAG (DIRTBAG OR APPROVED EQUAL) WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DE-WATERING.
4. HIGHLY TURBID CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER.

ELEMENT #11: MAINTAIN BMPs

1. INSPECT EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. MAKE NECESSARY REPAIRS AND MAINTENANCE TO ENSURE CONTINUED PERFORMANCE OF EROSION AND SEDIMENT CONTROLS.
2. 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.
3. TEMPORARY EROSION AND SEDIMENT CONTROL BMPs SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOILS SHALL BE PERMANENTLY STABILIZED.

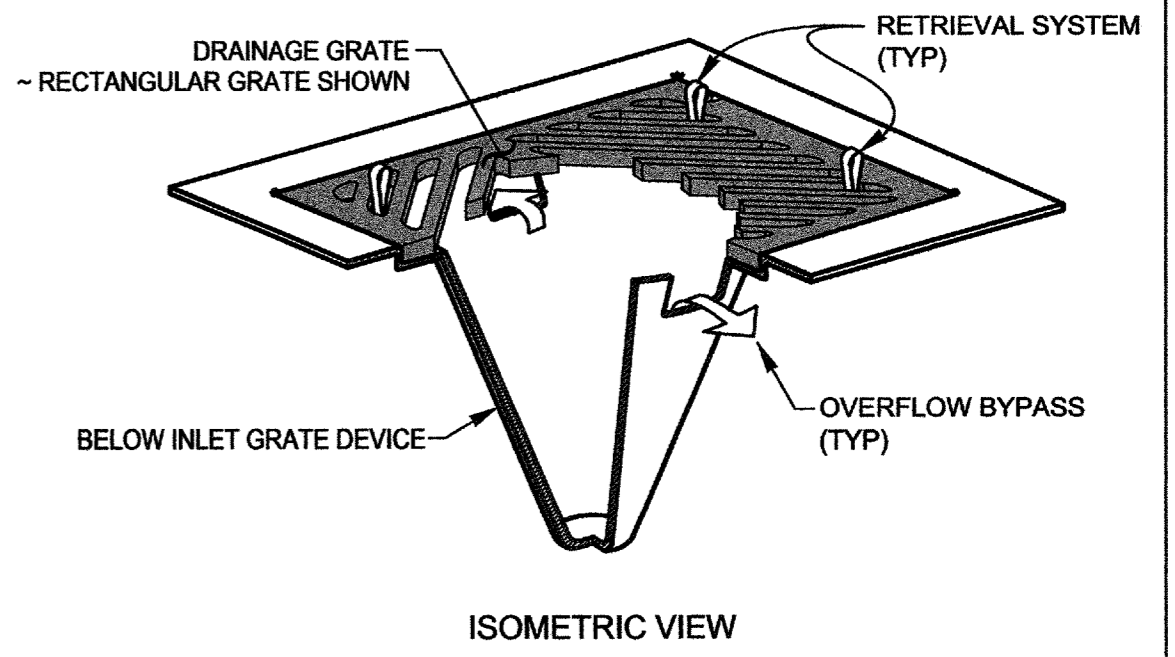
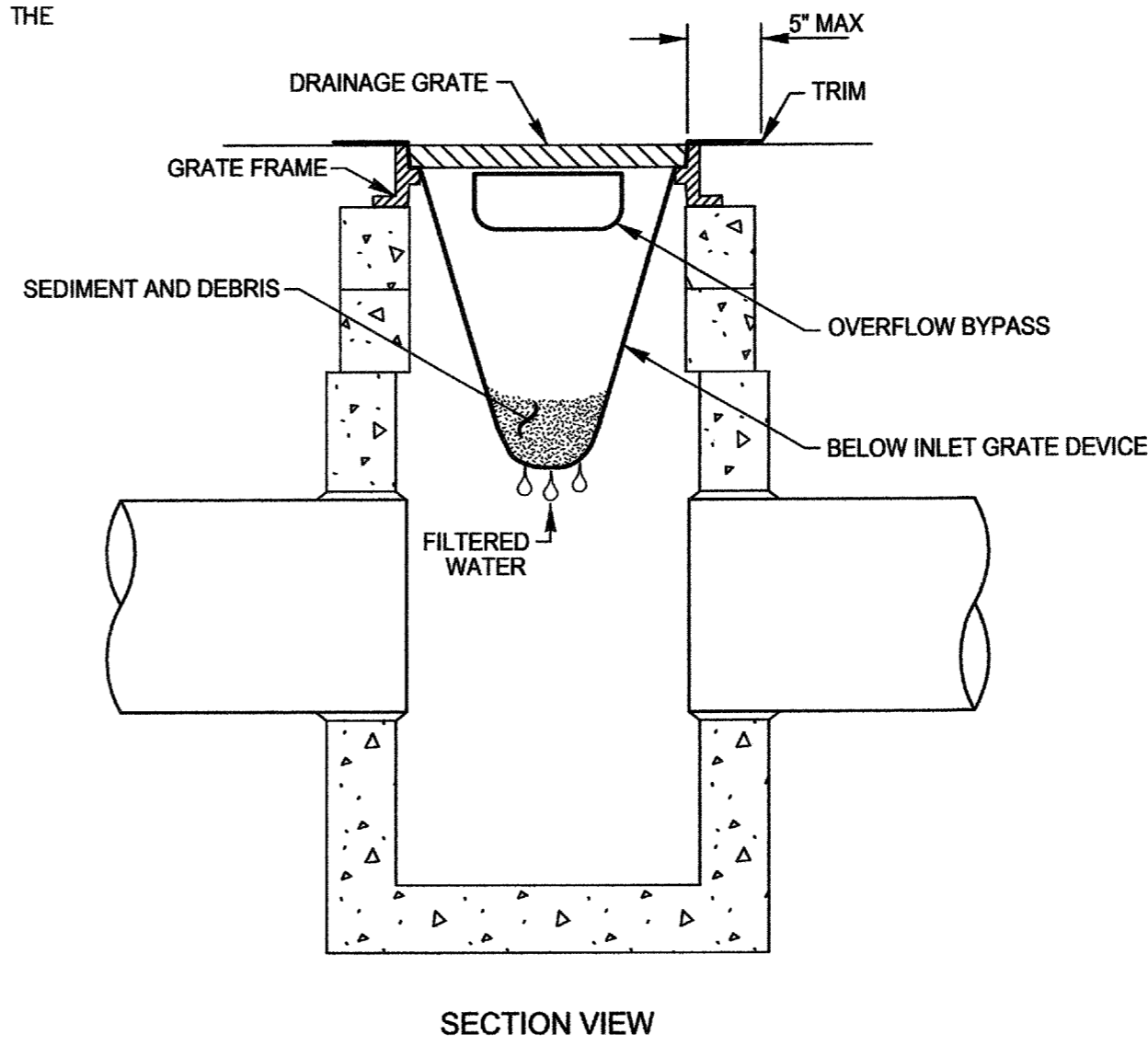
ELEMENT #12: MANAGE THE PROJECT

1. PHASING OF CONSTRUCTION:
 - a) DEVELOPMENT PROJECTS SHALL BE PHASED WHERE FEASIBLE IN ORDER TO PREVENT, TO THE MAXIMUM EXTENT PRACTICABLE, THE TRANSPORT OF SEDIMENT FROM THE DEVELOPMENT SITE DURING CONSTRUCTION. REVEGETATION OF EXPOSED AREAS AND MAINTENANCE OF THAT VEGETATION SHALL BE AN INTEGRAL PART OF THE CLEARING ACTIVITIES FOR ANY PHASE.
 - b) CLEARING AND GRADING ACTIVITIES FOR DEVELOPMENTS SHALL BE PERMITTED ONLY IF CONDUCTED PURSUANT TO AN APPROVED SITE DEVELOPMENT PLAN (e.g., SUBDIVISION APPROVAL) THAT ESTABLISHES APPROVED AREAS OF CLEARING, GRADING, CUTTING AND FILLING. WHEN ESTABLISHING THESE PERMITTED CLEARING AND GRADING AREAS, CONSIDERATION SHOULD BE GIVEN TO MINIMIZING REMOVAL OF EXISTING TREES AND MINIMIZING DISTURBANCE AND COMPACTION OF NATIVE SOILS EXCEPT AS NEEDED FOR BUILDING PURPOSES. THESE PERMITTED CLEARING AND GRADING AREAS AND ANY OTHER AREAS REQUIRED TO PRESERVE CRITICAL OR SENSITIVE AREAS, BUFFERS, NATIVE GROWTH PROTECTION EASEMENTS, OR TREE RETENTION AREAS AS MAY BE REQUIRED BY LOCAL JURISDICTIONS, SHALL BE DELINEATED ON THE SITE PLANS AND THE DEVELOPMENT SITE.
2. 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, SOIL TYPE, AND PROXIMITY TO RECEIVING WATERS; AND
 - b) LIMITATIONS ON ACTIVITIES AND THE EXTEND OF DISTURBED AREAS; AND
 - c) PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

BASED ON THE INFORMATION PROVIDED AND LOCAL WEATHER CONDITIONS, THE PROJECT LEAD MAY EXPAND OR RESTRICT THE SEASONAL LIMITATION ON SITE DISTURBANCE. THE PROJECT LEAD 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.

- THE FOLLOWING ACTIVITIES ARE EXEMPT FROM THE SEASONAL CLEARING AND GRADING LIMITATIONS:
- a) ROUTINE MAINTENANCE AND NECESSARY REPAIR OF EROSION AND SEDIMENT CONTROL BMPs;
 - b) ROUTINE MAINTENANCE OF PUBLIC FACILITIES OR EXISTING UTILITY STRUCTURES THAT DO NOT EXPOSE THE SOIL OR RESULT IN THE REMOVAL OF THE VEGETATIVE COVER TO SOIL; AND
 - c) ACTIVITIES WHERE THERE IS ONE HUNDRED PERCENT INFILTRATION OF SURFACE WATER RUNOFF WITHIN THE SITE IN APPROVED AND INSTALLED EROSION AND SEDIMENT CONTROL FACILITIES.

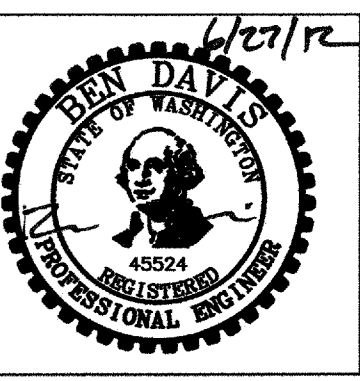
3. COORDINATE WITH UTILITIES AND OTHER CONTRACTORS
THE PRIMARY PROJECT PROPONENT SHALL EVALUATE, WITH INPUT FROM UTILITIES AND OTHER CONTRACTORS, THE STORMWATER MANAGEMENT REQUIREMENTS FOR THE ENTIRE PROJECT, INCLUDING THE UTILITIES, WHEN PREPARING THE CONSTRUCTION SWPPP.



DETAIL - STORM DRAIN INLET PROTECTION

REF: WSDOT STD PLAN I-40.20-00
NOT TO SCALE

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REV	DATE	DESCRIPTION	BY	APRV



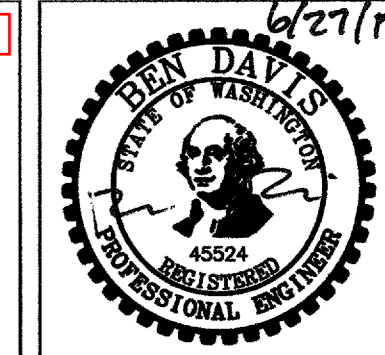
LINCOLN CREEK TRANS CENTER STORMWATER MODIFICATIONS SWPPP NOTES & DETAILS	Client Review	Design Review	Date
	Maintenance Review	Planning Review	6-27-2012

Building/Zone	LC
Sheet #	4 of 7
	C3
Job Number	PR0001765
Microfile Number	N4943



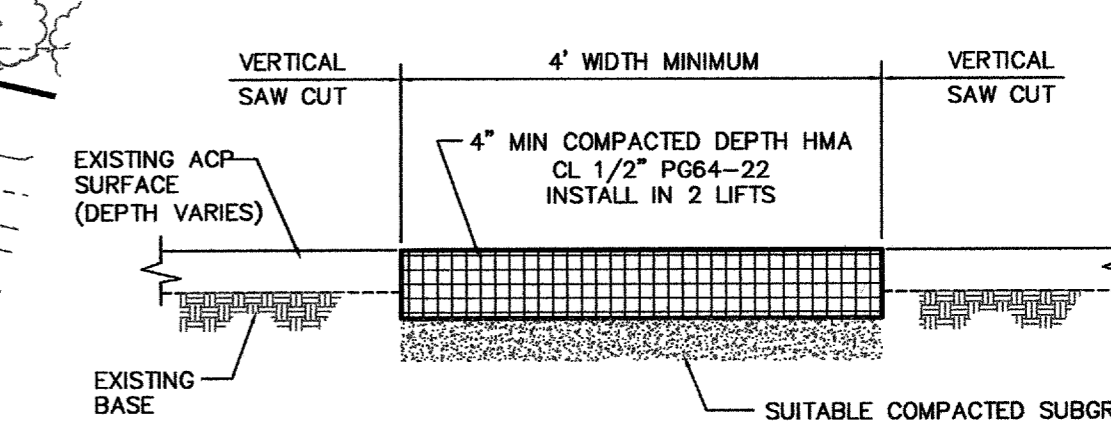
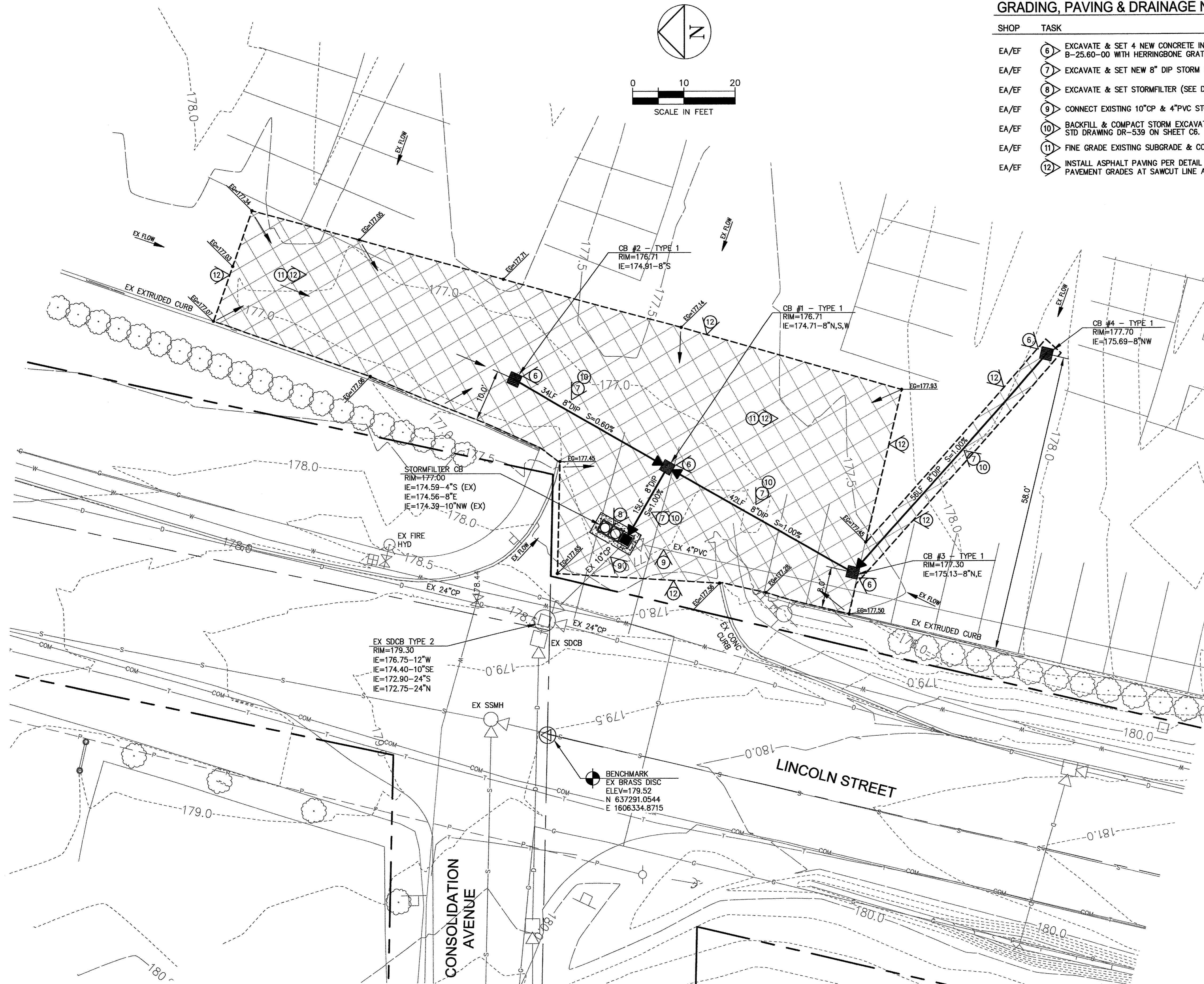
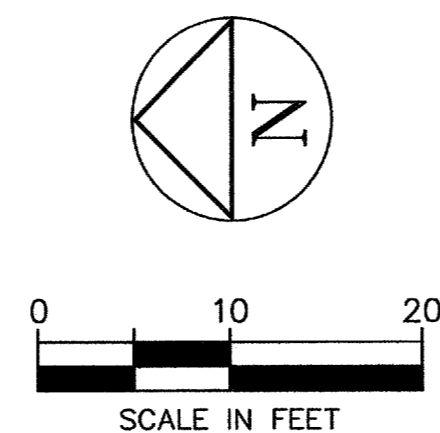
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 1620 W. Marine View Drive, Suite 200
 Everett Washington 98201
 Phone: 425.259.4099

Alt-20E



GRADING, PAVING & DRAINAGE NOTES

- | SHOP | TASK |
|-------|---|
| EA/EF | 6 EXCAVATE & SET 4 NEW CONCRETE INLETS PER WSDOT STD PLAN. B-25.60-00 WITH HERRINGBONE GRATE ON SHEET C6. |
| EA/EF | 7 EXCAVATE & SET NEW 8" DIP STORM DRAIN LINES AT GRADES SHOWN. |
| EA/EF | 8 EXCAVATE & SET STORMFILTER (SEE DETAIL ON SHEET C5). |
| EA/EF | 9 CONNECT EXISTING 10"CP & 4"PVC STORM LINES TO NEW STORMFILTER. |
| EA/EF | 10 BACKFILL & COMPACT STORM EXCAVATION PER CITY OF BELLINGHAM STD DRAWING DR-539 ON SHEET C6. |
| EA/EF | 11 FINE GRADE EXISTING SUBGRADE & COMPACT TO 90% MAX DRY DENSITY. |
| EA/EF | 12 INSTALL ASPHALT PAVING PER DETAIL THIS SHEET. MATCH EXISTING PAVEMENT GRADES AT SAWCUT LINE AS NOTED. |



DETAIL - TYPICAL PAVEMENT REPAIR
NO SCALE

REV	DATE	DESCRIPTION	BY	APRV



LINCOLN CREEK TRANS CENTER		Design Review	Date
STORMWATER MODIFICATIONS		Planning Review	6-27-2012
GRADING, PAVING & DRAINAGE PLAN		Approved by	JNS
Client Review		Drawn By	CLK
Design by		BRD	

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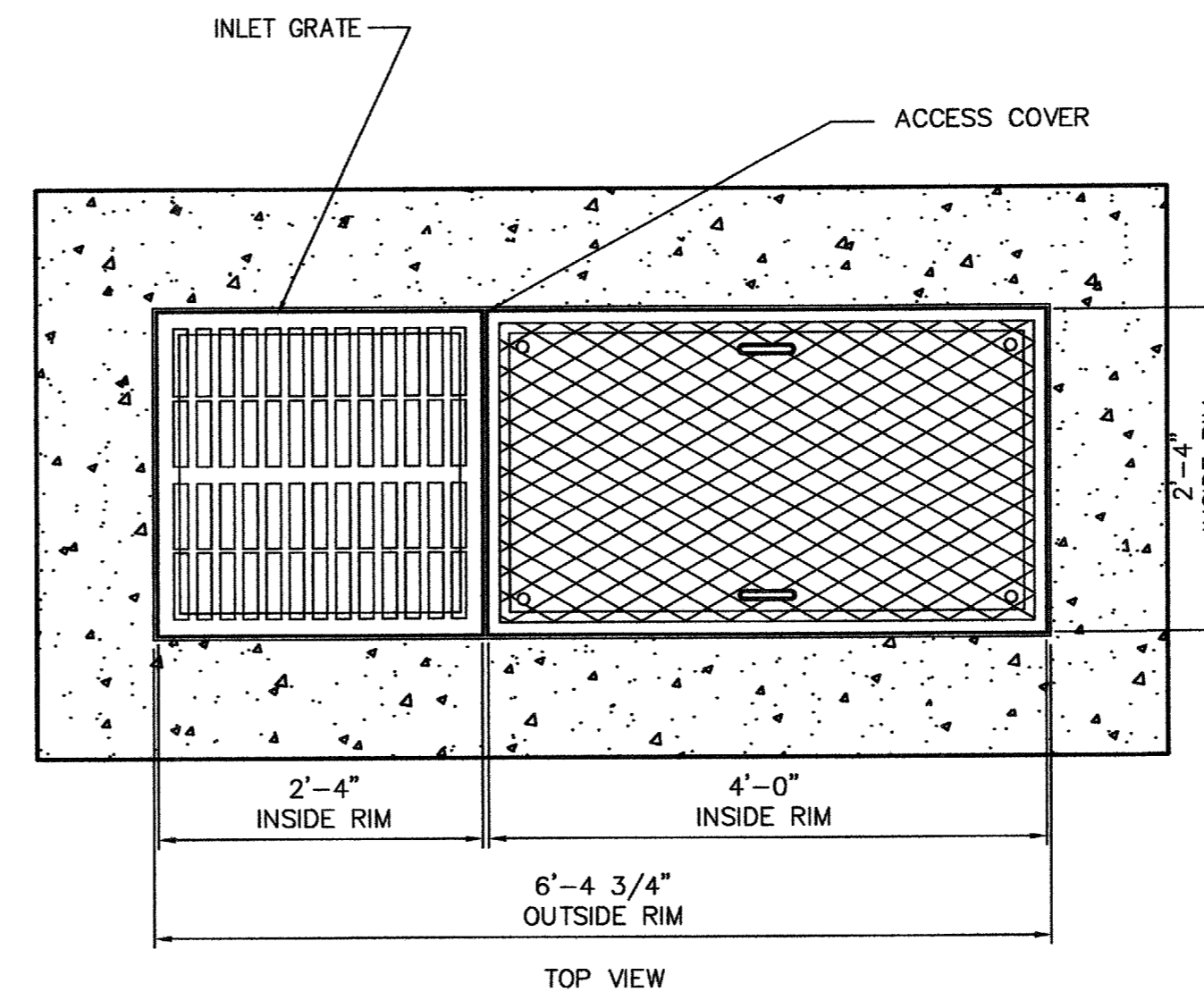
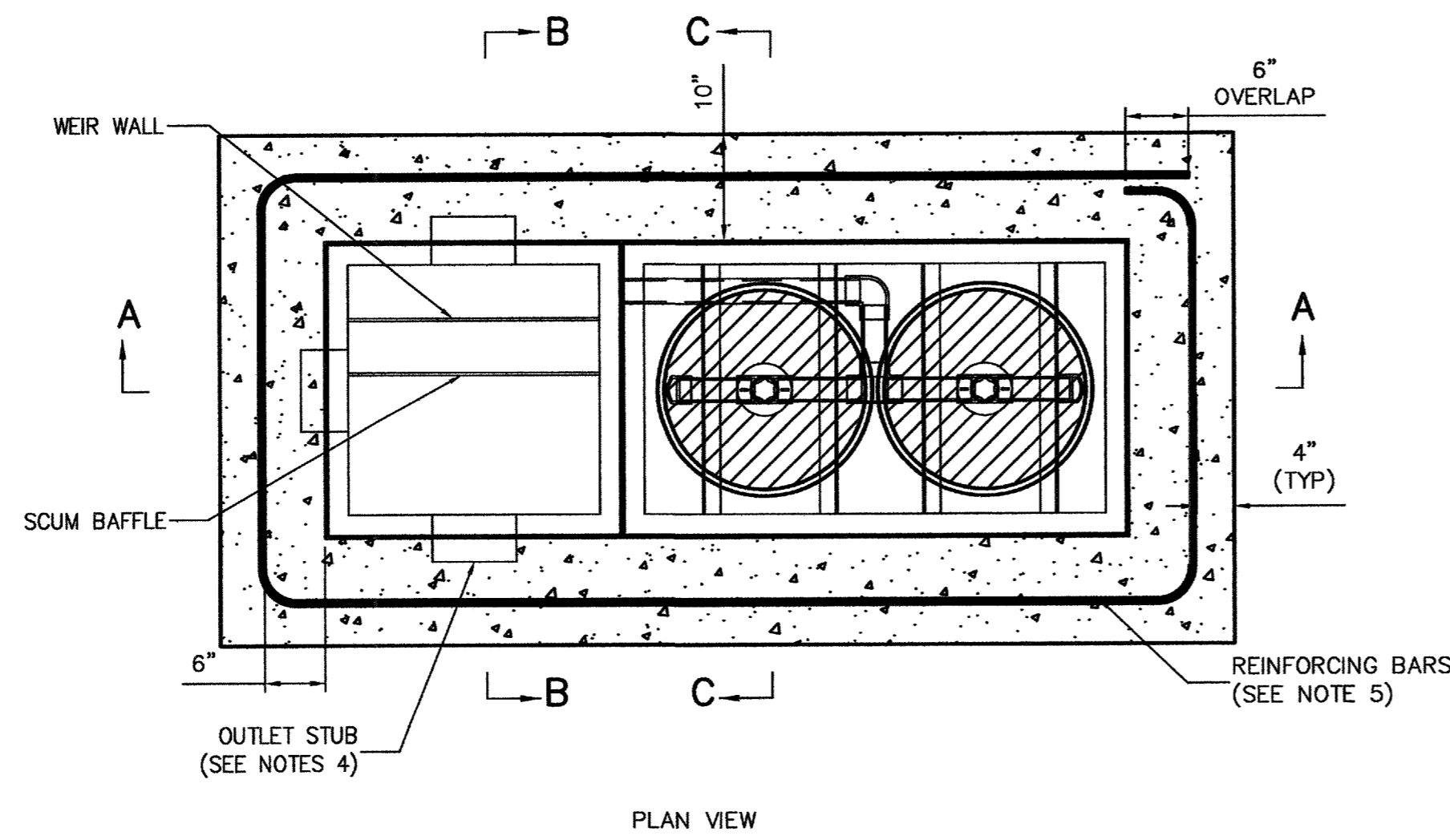
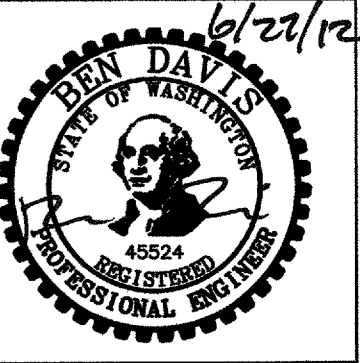
Building/Zone	LC
Sheet #	5 of 7
	C4
Job Number	PR0001765
Microfile Number	N4944

ASBUILT DRAWING



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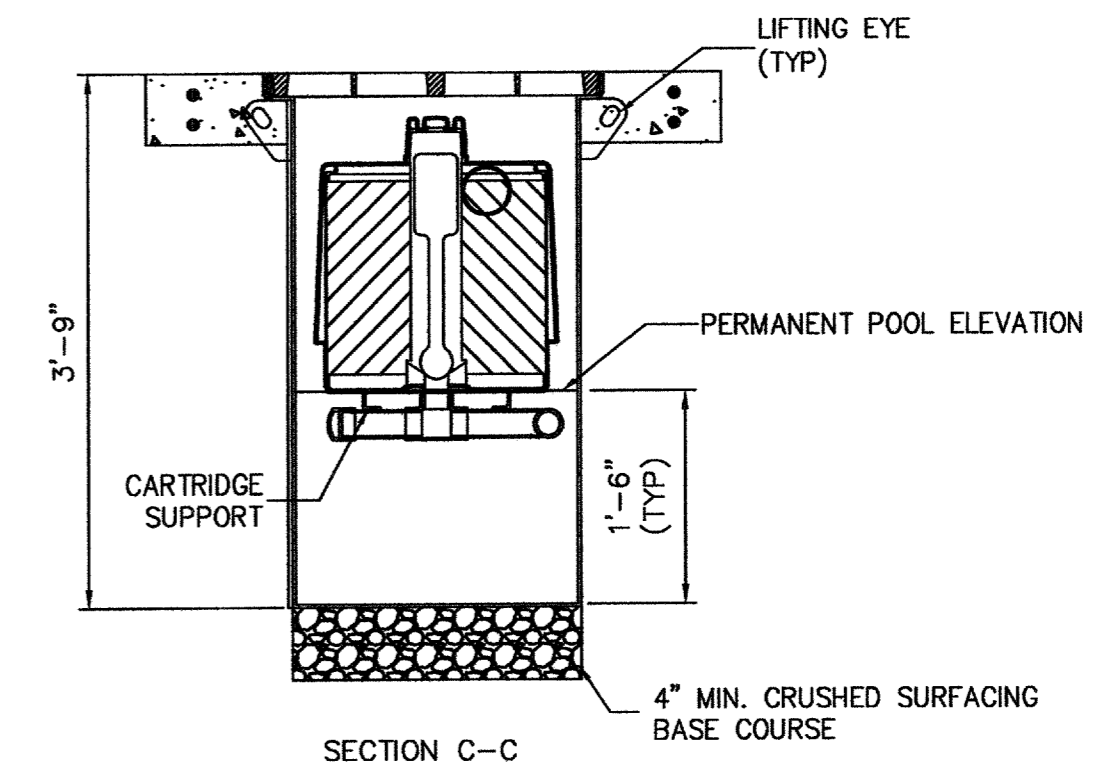
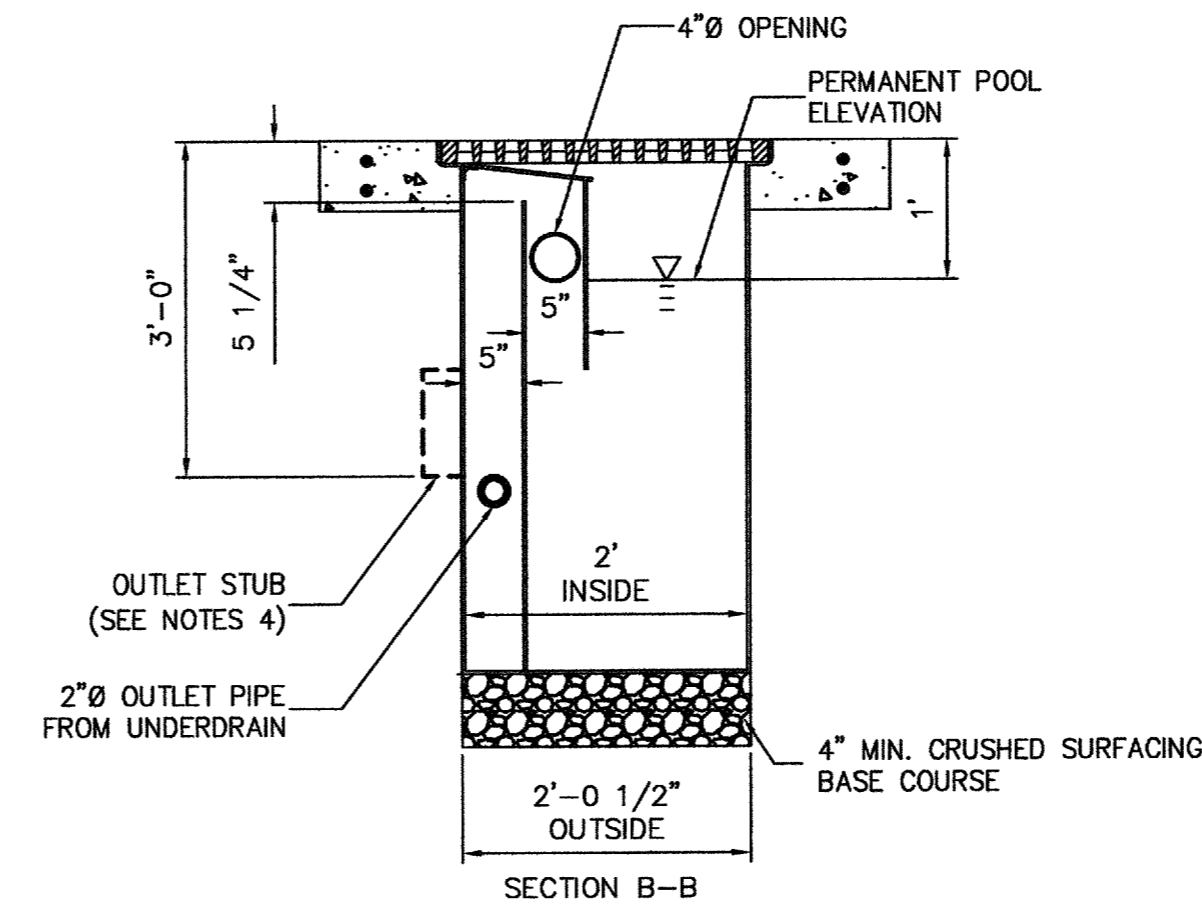
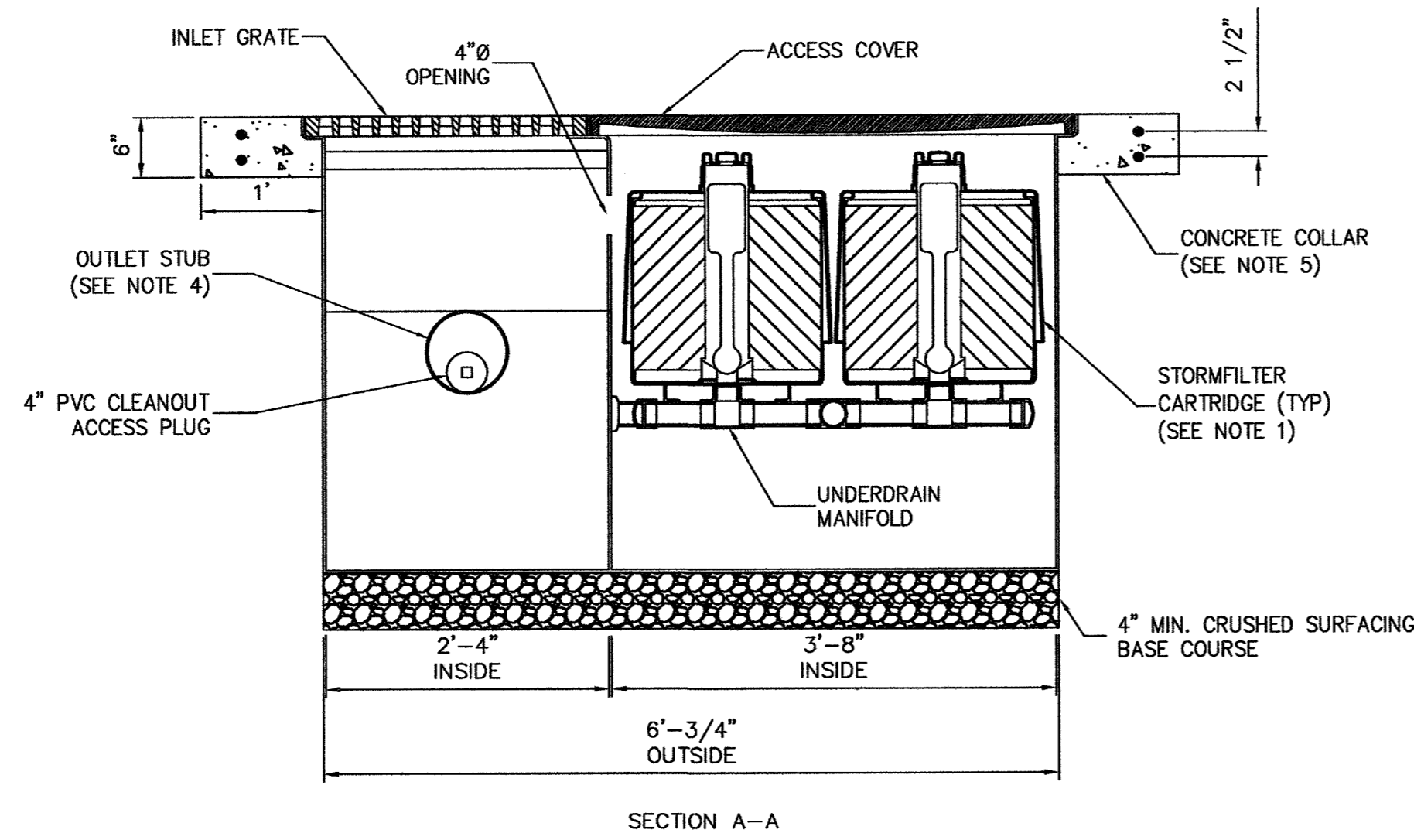
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GENERAL NOTES

1. FILTERS TO BE SIPHON-ACTUATED AND SELF-CLEANING.
2. STEEL STRUCTURE TO BE MANUFACTURED OF 1/4 INCH STEEL PLATE.
3. STORMFILTER REQUIRES 2.3 FEET OF DROP FROM RIM TO OUTLET. INLET SHOULD NOT BE LOWER THAN OUTLET. OUTLET PIPING IS NOTED IN THE PLAN AND IS TO BE PROVIDED BY CONTRACTOR.
4. STANDARD OUTLET STUB IS 8 INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15 INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR.
5. FOR H-20 LOAD RATING, 3,000 MIN. PSI CONCRETE COLLAR IS REQUIRED. CONCRETE COLLAR WITH QUANTITY (2) #4 REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.

2-CARTRIDGE CATCHBASIN STORMFILTER DATA	
WATER QUALITY FLOW RATE (cfs)	N/A
PEAK FLOW RATE (C_1 cfs)	N/A
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE FLOW RATE (15 OR 7.5 gpm)	7.5
MEDIA TYPE (CSF, PERLITE, ZPG)	ZPG
RIM ELEVATION	177.00
PIPE DATA:	
OUTLET STUB	I.E. DIAMETER 174.39 10"
CONFIGURATION	
SLOPED LID	NO
SOLID COVER	NO
NOTES/SPECIAL REQUIREMENTS: FACILITY REQUIRES 18" CARTRIDGE	



CATCHBASIN STORMFILTER DETAIL
(NOT TO SCALE)

REV	DATE	DESCRIPTION	BY	APRV



LINCOLN CREEK TRANS CENTER	
STORMWATER MODIFICATIONS	
GRADING, PAVING & DRAINAGE NOTES & DETAILS	Design Review
Maintenance Review	Approved by
Drawn By	CLK
Designed by	BRD
Date	6-27-2012

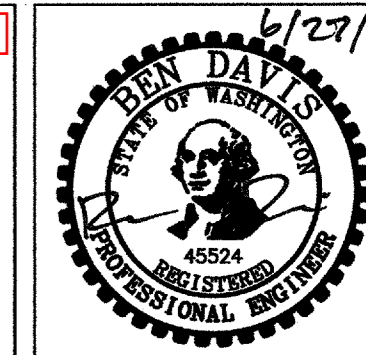
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Building/Zone	LC
Sheet #	6 of 7
	C5
Job Number	PR0001765
Microfile Number	N4945

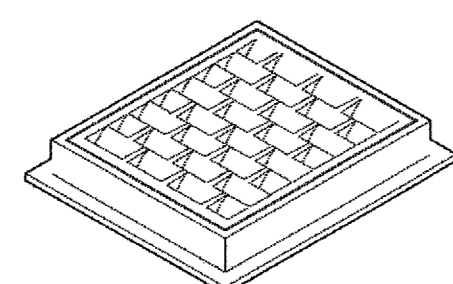


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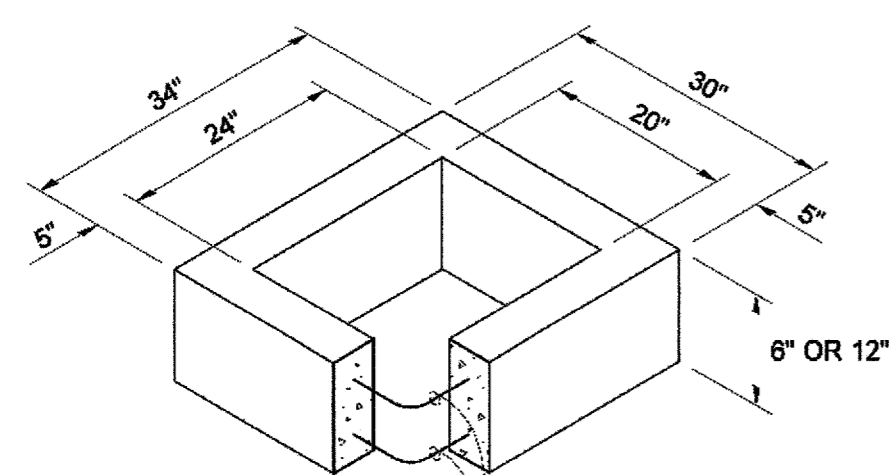


REV	DATE	DESCRIPTION	BY	APRV

DRAWN BY: MARK SUJKA

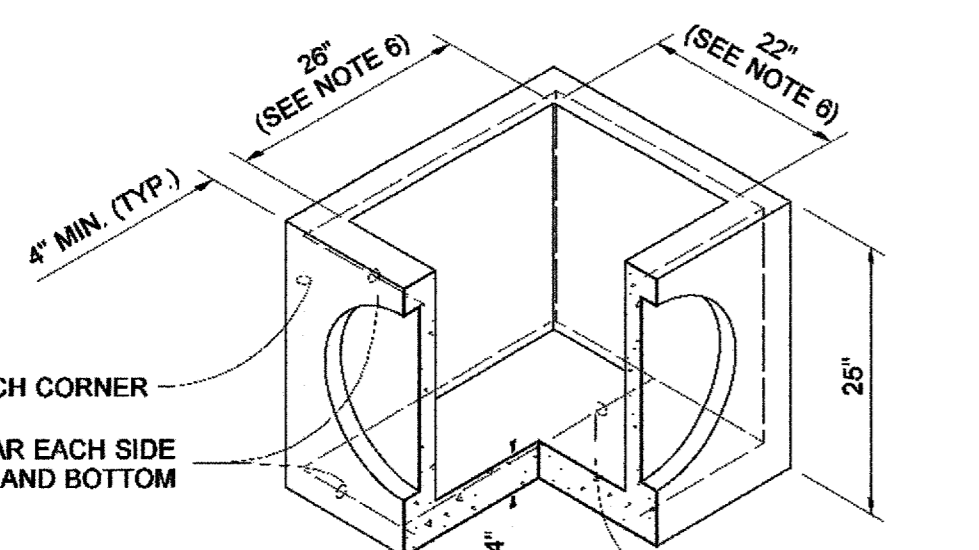


FRAME AND VANED GRATE



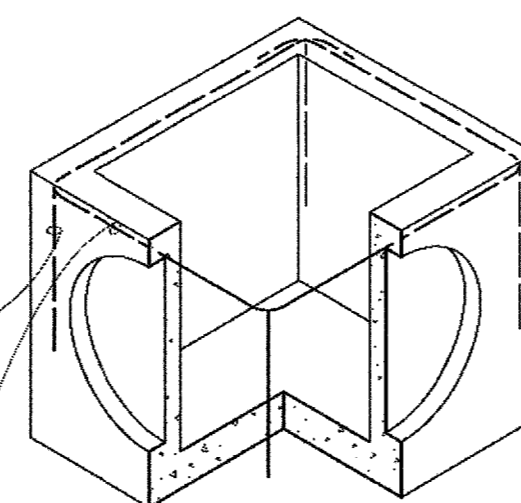
RECTANGULAR ADJUSTMENT SECTION

ONE #3 BAR HOOP FOR 6" HEIGHT
TWO #3 BAR HOOPS FOR 12" HEIGHT



PRECAST BASE SECTION

#3 BAR EACH CORNER
18" MIN.



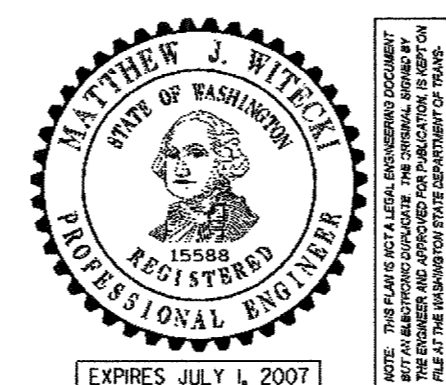
ALTERNATIVE PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 18". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
- The frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
- The opening shall be measured at the top of the precast base section.
- All pickup holes shall be grouted full after the inlet has been placed.



CONCRETE INLET

STANDARD PLAN B-25.60-00

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION

Harold J. Peterfeso 06-01-06
STATE LICENSE NUMBER
Washington State Department of Transportation

BEDDING SPECIFICATIONS FOR PVC PIPE

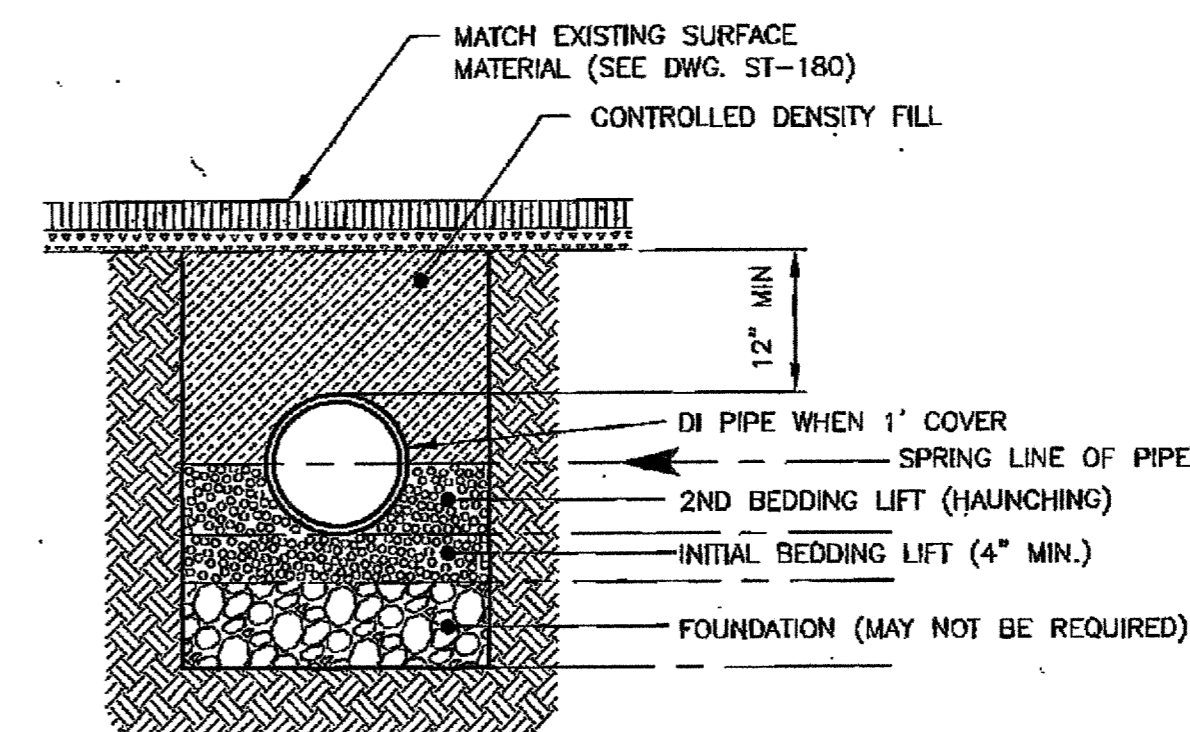
THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION:

BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE--

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

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

U.S. STANDARD SIEVE SIZE	PERCENT PASSING, BY WT.
1/2"	100
3/8"	95-100
#8	.0-10
#200	0-3



APPROVED <i>[Signature]</i> City Engineer	11/8/07 Date	CITY OF BELLINGHAM PIPE BEDDING DETAILS FOR 2' OR LESS OF COVER	DRAWING DR-539
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LINCOLN CREEK TRANS CENTER

STORMWATER MODIFICATIONS
GRADING, PAVING & DRAINAGE NOTES & DETAILS

Client Review	Designed by BRD	Drawn by CLK	Approved by JNS	Date 6-27-2012
Maintenance Review	Flaming Review	Design Review		

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