



# Plans, Specification Consistency and Construction Claims

**September 24, 2013**

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503-986-3012



## Purpose and Background

- Over the last two years I have seen claims related to ambiguities in our contract documents totaling over 2 million dollars. Overall the plan sets are consistent but there is easily room for improvement.
- Bring awareness of the issues, communicate the Contractors perspective to the POR's and work with the technical disciplines in making adjustments to minimize our risk for future claims. Overall improvement in the clarity of our contract documents.



## Contractor's Perspective

- Rely on our Contract Documents to be consistent, accurate, and constructible.
- Have a limited time to review and come up with a bid.
- Use past projects to give insight on future project bids.



## **00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered**

Before submitting a Bid, Bidders shall carefully examine the site of the proposed Work, the Bid Booklet, Plans, and Specifications. Bidders shall also contact Utility owners to verify all Utilities' anticipated involvement on the Project Site. Bidders are also encouraged to review any subsurface investigation material referenced in 00120.25 that may be available. Submission of a Bid will constitute confirmation that the Bidder has examined the Project Site and Solicitation Documents, finds the Plans and Specifications to be sufficiently detailed and accurate to enable Bidder to properly perform the Work, and understands the conditions to be encountered in performing the Work and all requirements of the Contract.

The Agency and its employees will not be responsible for loss or unanticipated costs suffered by the Bidder because of the Bidder's failure to become fully informed about all conditions of the Work or failure to request clarification of Plans and



## **00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered - Cont.**

Any clarification of Plans and Specifications needed by the Bidder shall be requested in writing through the Engineer. Requests shall be made in sufficient time for the Agency's reply to reach all Bidders before Bid Closing. Oral explanations or interpretations given before receiving Bids for a Project will not be binding. To be binding, interpretation of the Plans and Specifications by the Agency must be made by written Addendum furnished to all Holders of Bidding Plans according to 00120.30. Notification of erroneous or incomplete Plans or Specifications shall also be submitted to the Engineer. Such notification shall also be made in sufficient time for the Agency to make any necessary modifications and issue Addenda to Bidders prior to Bid Closing.



## **00120.20 Interpretation of Quantities in Bid Schedule**

Quantities appearing in the Bid Schedule are approximate and are provided only for comparison of Bids. The Agency does not warrant that the actual individual items, amount of Work, or quantities will correspond to those shown in the Bid Schedule. Payment to the Contractor will be made only for actual quantities of Work performed and accepted or Materials furnished and accepted, as required by the Contract. Quantities of Work to be performed and Materials to be furnished may each be increased, decreased, or omitted as provided in 00120.30 and 00140.30.



## **00120.30 Changes to Plans, Specifications, or Quantities before Opening of Bids**

The Agency reserves the right to issue Addenda making changes or corrections to the Plans, Specifications, or quantities. The Agency will provide Addenda only by publishing them on the Agency's web site. See the ODOT web site page included with the Special Provisions for the web site address where the Addenda are available.

Addenda may be downloaded from the web site. Bidders shall be responsible for checking the Agency web site for Addenda. Bidders should check the web site weekly until the week of Bid Closing and daily the week of Bid Closing.

Bidders, not the Agency, shall be responsible for failure of Bidders to check and download Addenda. Bids shall incorporate all Addenda. Bids may be rejected if opened and found by the Agency to not be based on all Addenda published on the web site before Bid Closing.



## 00150.10 Coordination of Specifications and Plans

The Contract Documents, including but not limited to Contract Change Orders, the Special Provisions, the Plans, Supplemental Specifications, and the Standard Specifications are intended to collectively describe all of the items of Work necessary to complete the Project.

**(a) Order of Precedence** - The Engineer will resolve any discrepancies between these documents in the following order of precedence:

- Contract Change Orders;
- Special Provisions;
- Agency-prepared drawings specifically applicable to the Project and bearing the Project title;
- Reviewed and accepted, stamped Working Drawings;
- Standard Drawings;
- Approved Unstamped Working Drawings;
- Supplemental Specifications;
- Standard Specifications; and
- All other contract documents not listed above.



## 00150.10 Coordination of Specifications and Plans - cont.

Notes on a drawing shall take precedence over drawing details.

Dimensions shown on the drawings, or that can be computed, shall take precedence over scaled dimensions.

**(b) Immaterial Discrepancies** - The Specifications and Plans specify details for the construction and completion of the Work. If Specifications or Plans describe portions of the Work in sufficient detail but are silent in some minor respect, the Contractor may proceed utilizing the current best industry practices.

**(c) Material Discrepancies** - If the Contractor identifies a discrepancy, error, or omission in the Specifications or Plans that cannot be resolved by the approach specified in (b) above, the Contractor shall immediately request clarification from the Engineer.



# Geotechnical





## Geotechnical Consistency Considerations

- Differing Site Conditions
  - 120.25 Subsurface Investigations.
    - “The data concerning borings is intended to represent with reasonable accuracy conditions and materials found in specific borings at the time the borings were made.”
  - Bore hole locations
  - Plans and Specifications
  - Geotechnical Report
  - Will be working with the Geo-Hydro Leadership Team.



## Boulder Creek (Beaver – Blain Road) Bridge

00520.41(d) Preboring – The third paragraph of this subsection, which begins “Make prebored holes smaller...”, is replaced with the following sentence:

Make prebored holes the diameter shown.

Add the following sentence to the end of this subsection:

Use auguring, wet-rotary drilling or other approved methods of preboring as directed. **The Contractor is advised that boulders and large cobbles are anticipated in the preboring locations.**





## Earthwork Section 00330

- Excavation Basis of Measurement
- Embankment Basis Measurement



## **00330.81 Excavation Basis Measurement**

When measurement of earthwork is on the excavation basis, the materials will be measured in their original positions before excavation. Measurement will be limited to the lines, grades, and slopes as established.

The quantities of excavation measured for payment will include the volumes of:

- Abandoned pipe and miscellaneous matter within excavation limits.
- Materials removed below sub grade in roadbed excavations according to 00330.41(a-9) and 00330.91(d).
- Over break determined to be unavoidable according to 00330.41(a-10).



## **00330.81 Excavation Basis Measurement - Cont.**

The following earthwork items will be measured on the excavation basis:

- Borrow Excavation
- Ditch Excavation
- Foundation Excavation
- General Excavation
- Toe Trench Excavation

Embankments required or necessary to perform earthwork on the excavation basis will not be measured separately.



## 00330.93 Excavation Basis Payment

When listed in the Contract Schedule of Items, the following items will be paid for on the excavation basis:

<b>Pay Item</b>	<b>Unit of Measurement</b>
(a) Ditch Excavation	Cubic Yard
(b) Foundation Excavation	Cubic Yard
(c) Toe Trench Excavation	Cubic Yard
(d) General Excavation	Cubic Yard
(e) Borrow Excavation	Cubic Yard

These items include excavating, selecting, handling, hauling, placing, and compacting the materials as specified.



## 00330.82 Embankment Basis Measurement

When measurement of earthwork is on the embankment basis, the materials will be measured in their final embankment position. Measurement will be limited to the lines, grades, and slopes of the original ground contours after clearing and grubbing and compaction is performed according to 00330.43(a) before embankment construction begins.

The quantities of embankment measured for payment will include the volumes of materials used to backfill excavations below sub grade and holes when shown or directed.

The quantities of embankment measured for payment will not include the volumes of:

Any additional quantities required due to subsidence, settlement of the ground or base, settlement within embankments, or to shrinkage, settlement, washout, slippage, or loss regardless of cause, subject to 00170.80 or 00170.82.

- Any additional quantities required due to compaction efforts that are required in 00330.43.
- Slide materials paid for as Extra Work.
- Any materials for which payment is made for completed embankments or backfills under other Contract provisions.



## 00330.82 Embankment Basis Measurement - cont.

The following earthwork items will be measured on the embankment basis:

- Embankment In Place
- Stone Embankment
- Extra For Selected \_\_\_\_\_ Material

Excavations, including cutbank rounding, over break whether avoidable or not, and foundation benching, required or necessary to perform earthwork on the embankment basis, and retrieval or removal of cobbles and boulders according to 00330.42(c-2-a) will not be measured separately.

When an excavation basis item is included in the Contract Schedule of Items and selected materials are obtained from the excavation for use as "Extra for Selected Material", measurement will be made for both items.



## 00330.94 Embankment Basis Payment

When listed in the Contract Schedule of Items, the following items will be paid for on the embankment basis:

<b>Pay Item</b>	<b>Unit of Measurement</b>
(a) Embankment In Place	Cubic Yard
(b) Stone Embankment	Cubic Yard
(c) Extra For Selected _____ Material	Cubic Yard

Item (a) includes excavating, selecting, handling, hauling, placing, and compacting of the materials as specified and all other costs incurred in furnishing required embankment materials.

Item (b) includes furnishing, selecting, handling, hauling, placing, and compacting the material as specified.

In item (c), the type of material will be inserted in the blank.



## **00330.94 Embankment Basis Payment - Cont.**

Item (c) includes preserving, sorting, stockpiling, and handling of the specified selected materials as described in 00330.41(a-1) and 00330.41(a-2), selected and placed according to 00330.42, 00330.47 and the Special Provisions.

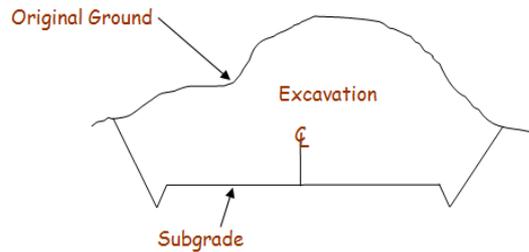
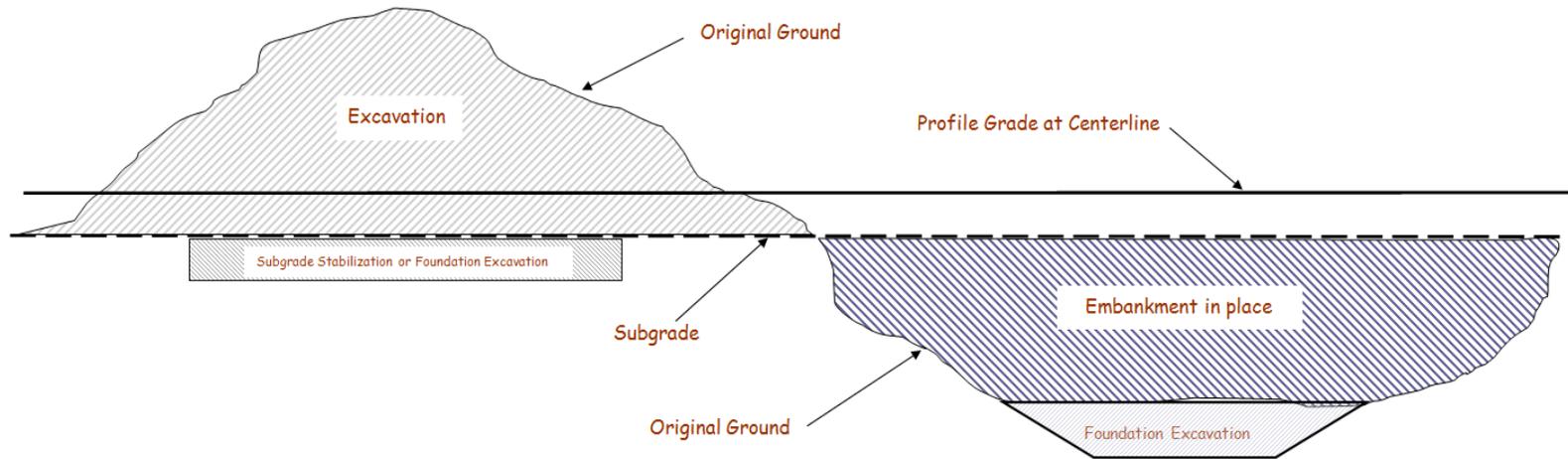
Unless a specific pay item in the form of item (c) appears in the Contract Schedule of Items, no separate or additional payment will be made for preserving, sorting and handling selected materials. However, earthwork materials obtained from excavations and incorporated into specified embankments will be paid for at the applicable item, if listed in the Contract Schedule of Items.

Excavation of unstable material that is below sub grade in roadbed excavation areas, according to 00330.41(a-9), will be paid for according to 00195.20.



# Excavation, Embankment in Place and Foundation Excavation

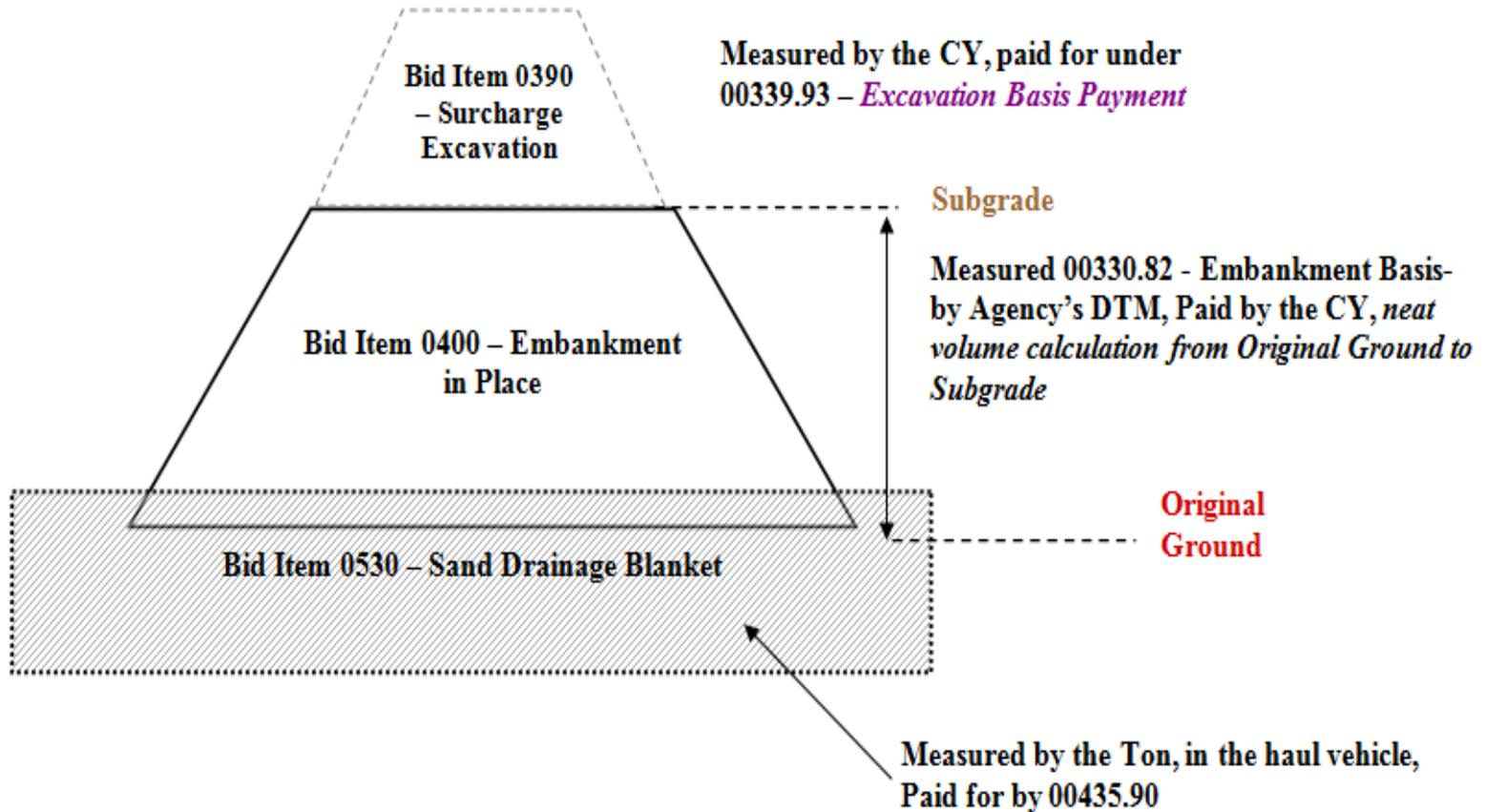
*Special Provision 00330.03 - Basis of Performance:*  
*"Perform all earthwork under this Section except for Ditch Excavation and Foundation Excavation on the embankment basis."*



*Not to scale, for illustration purposes*



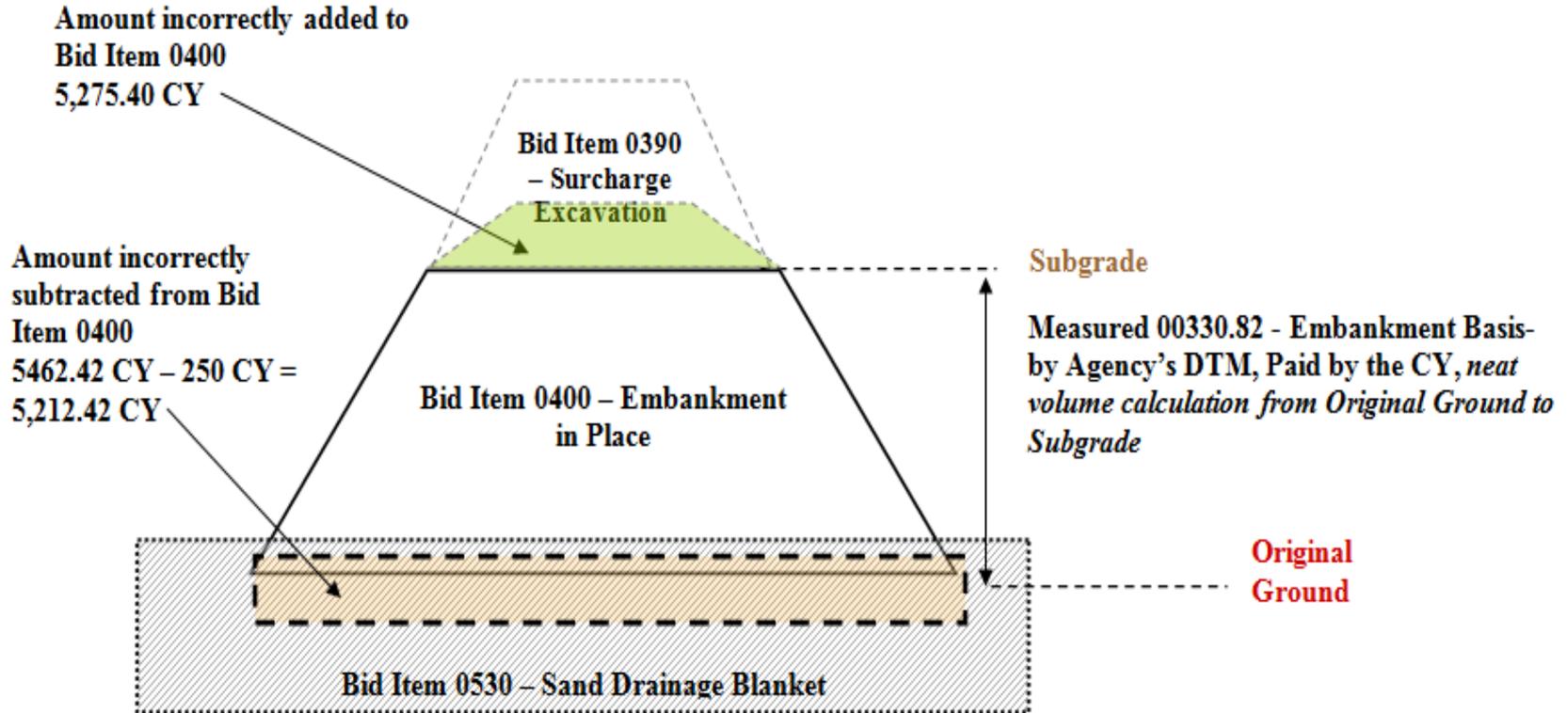
# Surcharge Excavation



*Not to scale*



# Surcharge Excavation



Not to scale



## Earthwork Lessons Learned

- Combining Excavation and Embankment basis measurement can be confusing.
  - Will work with Roadway Leadership Team to develop Specification changes to clarify.
- Extra for item in Embankment Basis needs to be revised.
- Measurement and Payment is managed by Contract Administration. Contact Gene Wilborn (503)986-3135 with any questions.



# Consistency in Plans

Revised Plan  
Sheets Incorporated

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
I	Title Sheet
IA	Index Of Sheets Cont'd. & Std. Drg. Nos.
IB	Plan Sheet Layout
IC	Survey Control Network
IC-2	Survey Control Chart

## STATE OF OREGON DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT  
**DRAINAGE, STRUCTURES, PAVING, SIGNING, ILLUMINATION,  
SIGNALS AND ROADSIDE DEVELOPMENT**

### OR 99E: DUNES DRIVE - 10TH STREET (OREGON CITY) SEC.

**PACIFIC HIGHWAY EAST (McLOUGHLIN BOULEVARD)**

CLACKAMAS COUNTY

MARCH 2008

**BEGINNING OF PROJECT**

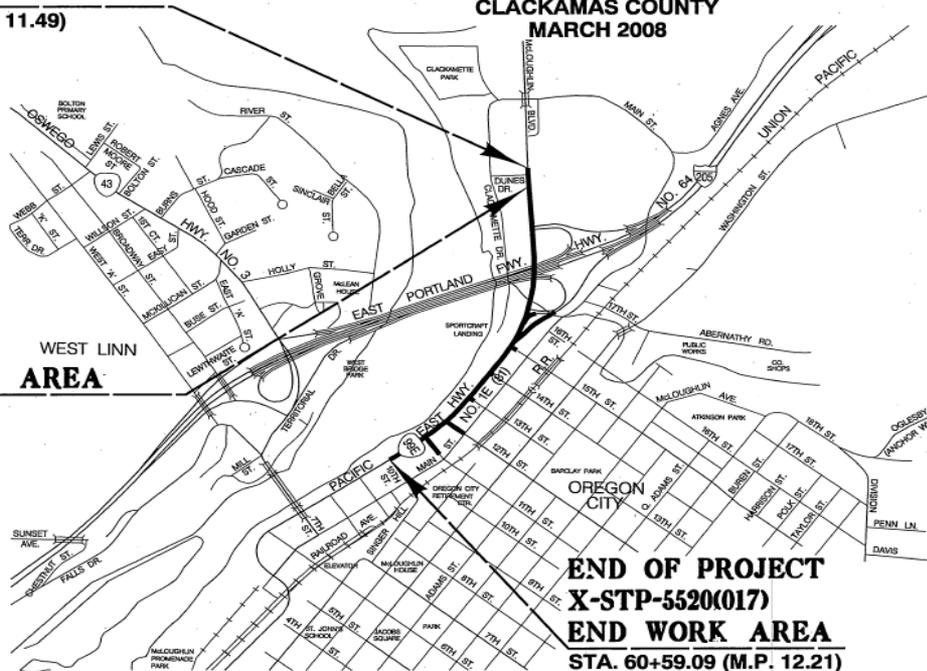
**X-STP-5520(017)**

STA. 22+73.73 (M.P. 11.49)

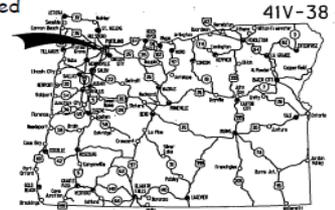
Revised Plan  
Sheets Incorporated

**BEGIN WORK AREA**

STA. 26+07.91



**END OF PROJECT**  
**X-STP-5520(017)**  
**END WORK AREA**  
STA. 60+59.09 (M.P. 12.21)



Overall Length Of Project - 0.72 Miles

**ATTENTION:**  
Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through OAR 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. Note The Telephone Number For The Oregon Utility Center Is (503) 232-1987.

LET'S ALL  
WORK TOGETHER  
TO MAKE THIS  
JOB SAFE

OREGON TRANSPORTATION COMMISSION  
Gail L. Achterman CHAIR  
Mike Nelson VICE-CHAIR  
Janice J. Wilson COMMISSIONER  
Vacont COMMISSIONER  
Vacont COMMISSIONER  
Matthew L. Garrett DIRECTOR OF TRANSPORTATION

PLANS PREPARED FOR  
BY:  
**DAVID EVANS AND ASSOCIATES INC.**  
200 Southeast River Parkway  
Portland Oregon 97202 Ph: 503.233.6663

REGISTERED PROFESSIONAL  
ENGINEER  
14458  
*Michael J. Hick*  
OREGON  
JULY 26, 1989  
MICHAEL J. HICK

EXPIRES 6-30-09

OREGON DEPARTMENT OF TRANSPORTATION  
BY: *A. M. N.* 2-08  
DATE

OR 99E: DUNES DRIVE - 10TH STREET  
(OREGON CITY) SEC.  
PACIFIC HIGHWAY EAST (McLOUGHLIN BOULEVARD)  
CLACKAMAS COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	X-STP-5520(017)	1



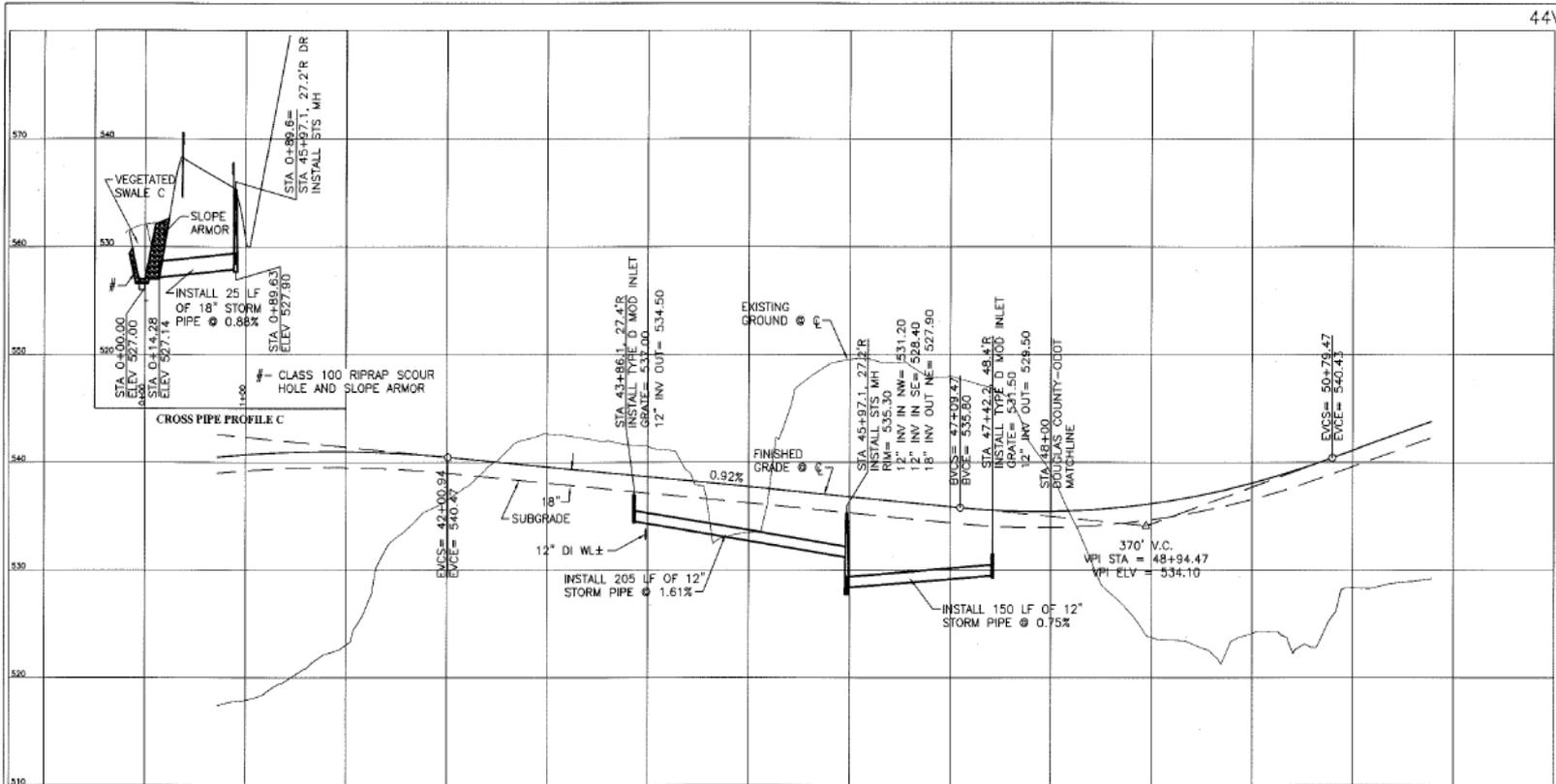
T. I. S., R. 2 E., W.M.





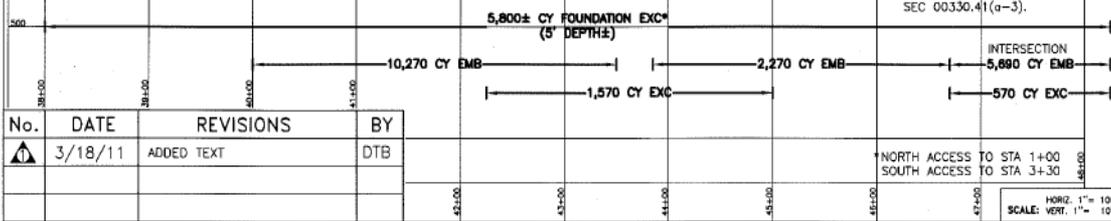
## Consistency in Plans

- 00150.10 Coordination of Specifications and Plans.
- Specification use of “As shown on plans”
- Overall our plans are consistent. It is important to remember consistency when reviewing Local Program and Consultant prepared plans to help make our entire program successful.
- Plan notes match Bid Item name.
- Intent versus Clarity.



**NOTE:**  
EXCAVATION SHOWN DOES NOT INCLUDE  
WASTE EXCAVATION MATERIAL DETAILED  
ON SHEET DC-33.

\* SEE NOTE SHEET 11B & GB FOR  
SOURCE OF SELECT STONE BACKFILL.  
(DO NOT REUSE FOUNDATION EXC  
MATERIAL ON THIS PROJECT. SEE  
SEC 00330.41(a-3).

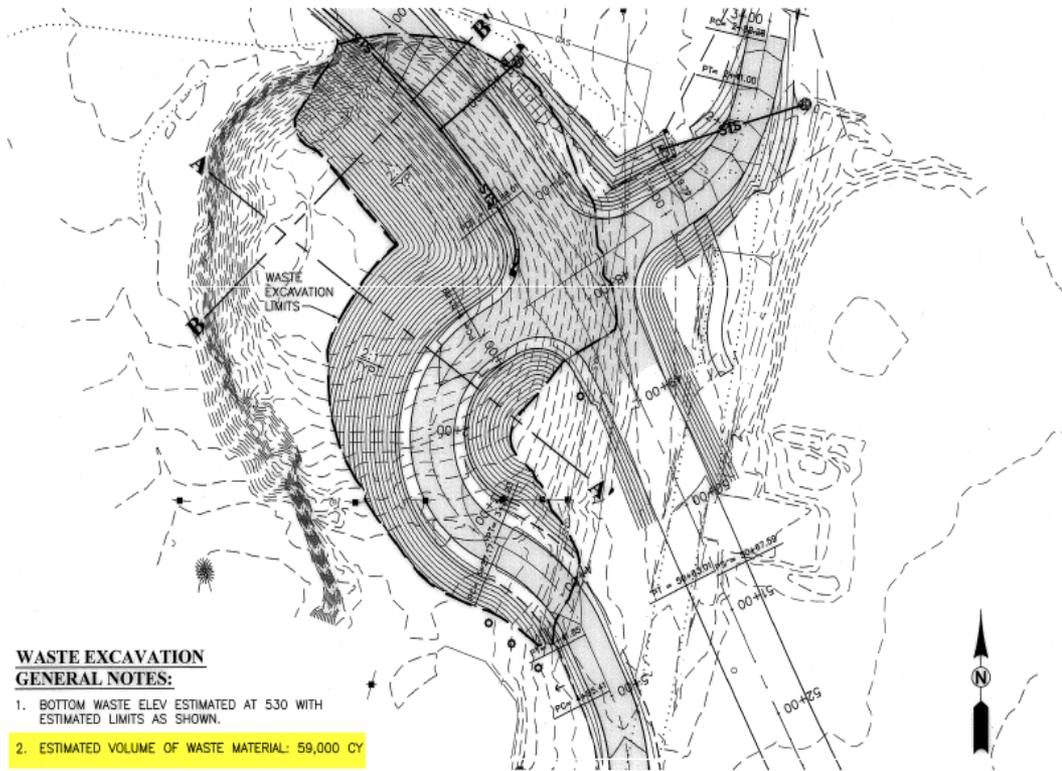


No.	DATE	REVISIONS	BY
▲	3/18/11	ADDED TEXT	DTB



EXPIRES: 12/31/2011

**OREGON DEPARTMENT OF TRANSPORTATION**  
**i.e. ENGINEERING**  
 809 SE Pine Street Roseburg, Oregon 97470  
 PHONE (541) 673-0166 FAX (541) 440-9392  
 email@ieengineering.com  
 I-5 DEL RIO ROAD/WINCHESTER INTERCHANGE  
 BUNDLE 357  
 DOUGLAS COUNTY  
 Designed By - David Buhl  
 Drafted By - Andrew Vasquez  
 DEL RIO ROAD (DR LINE) PROFILE  
 STA 40+00 TO 48+00  
 SHEET NO. DC-28



### WASTE EXCAVATION

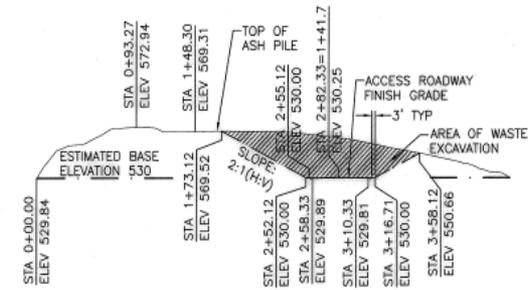
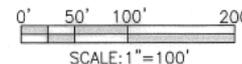
#### GENERAL NOTES:

1. BOTTOM WASTE ELEV ESTIMATED AT 530 WITH ESTIMATED LIMITS AS SHOWN.
2. ESTIMATED VOLUME OF WASTE MATERIAL: 59,000 CY
3. MATERIAL IS OLD ASH FROM MILL BURNERS.
4. GRADE FINAL SURFACE OUTSIDE OF ROADWAY EMB TO DRAIN TO PREVENT PONDING.

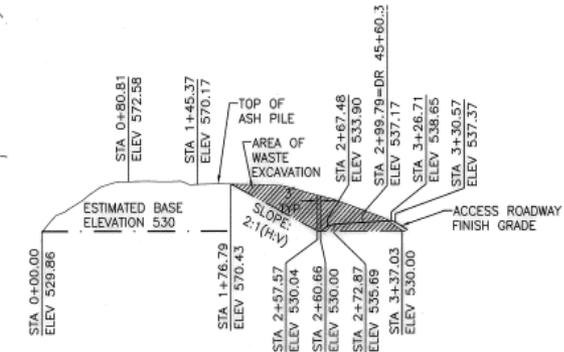
#### EXCAVATION NOTES:

1. EXCAVATED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR. (SEE STANDARD SPECIFICATIONS)

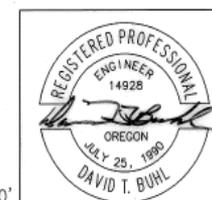
--- EXISTING GROUND CONTOURS (2' INTERVALS)  
 ——— FINISH SLOPE CONTOURS (2' INTERVALS)



**ASH PILE CROSS SECTION SECTION A-A'**



**ASH PILE CROSS SECTION SECTION B-B'**



EXPIRES: 12/31/2011

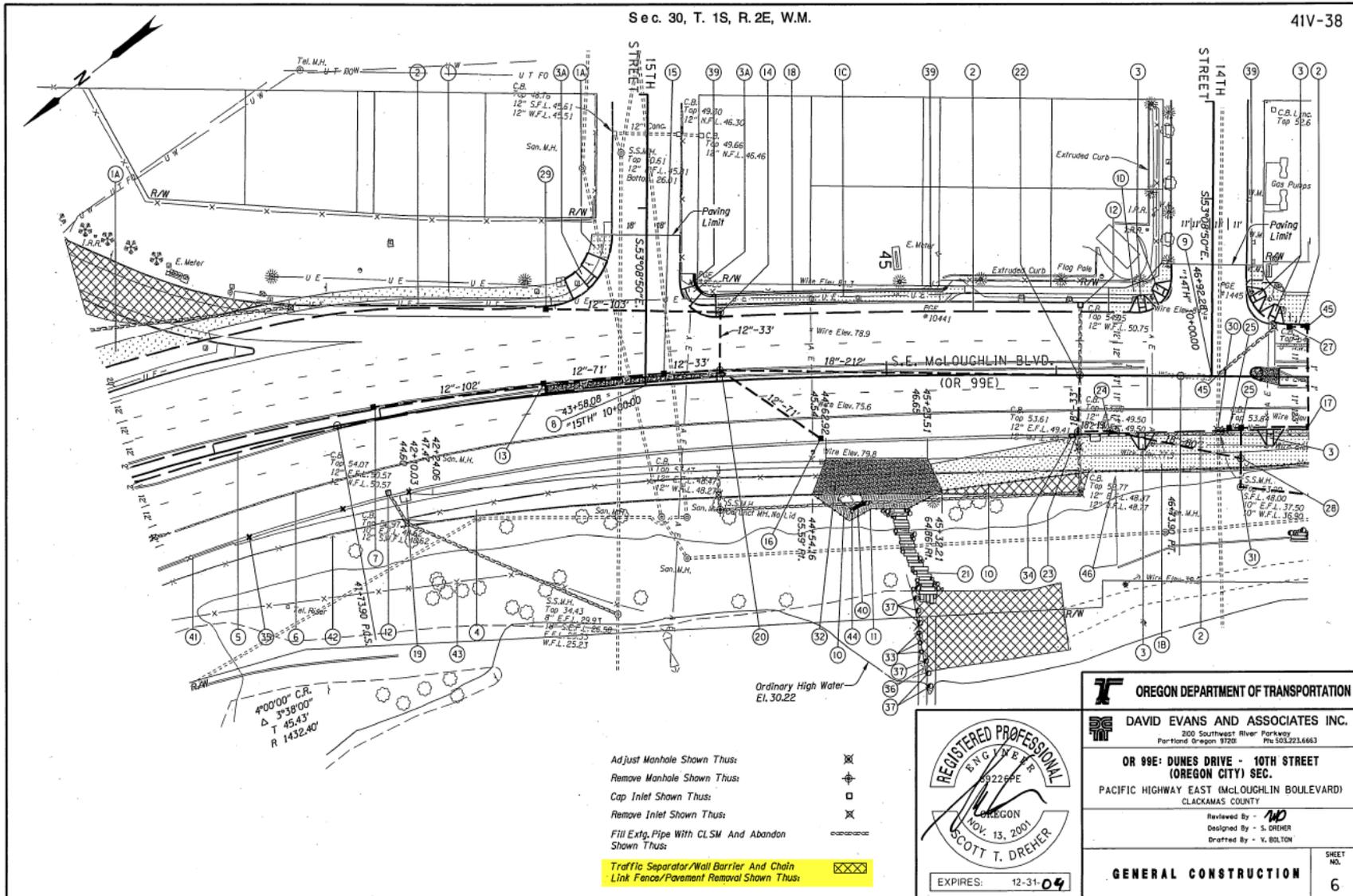
<b>i.e.</b> ENGINEERING 809 SE Pine Street Roseburg, Oregon 97470 PHONE (541) 673-0166 FAX (541) 440-9392 email@ieengineering.com	
I-5 DEL RIO RD/WINCHESTER INTERCHANGE BUNDLE 357	
DOUGLAS COUNTY	
Designed By - David Buhl Drafted By - Andrew Vasquez	
ASH PILE WITH CROSS SECTIONS	SHEET NO. <b>DC-33</b>



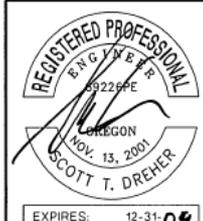


Sec. 30, T. 1S, R. 2E, W.M.

41V-38

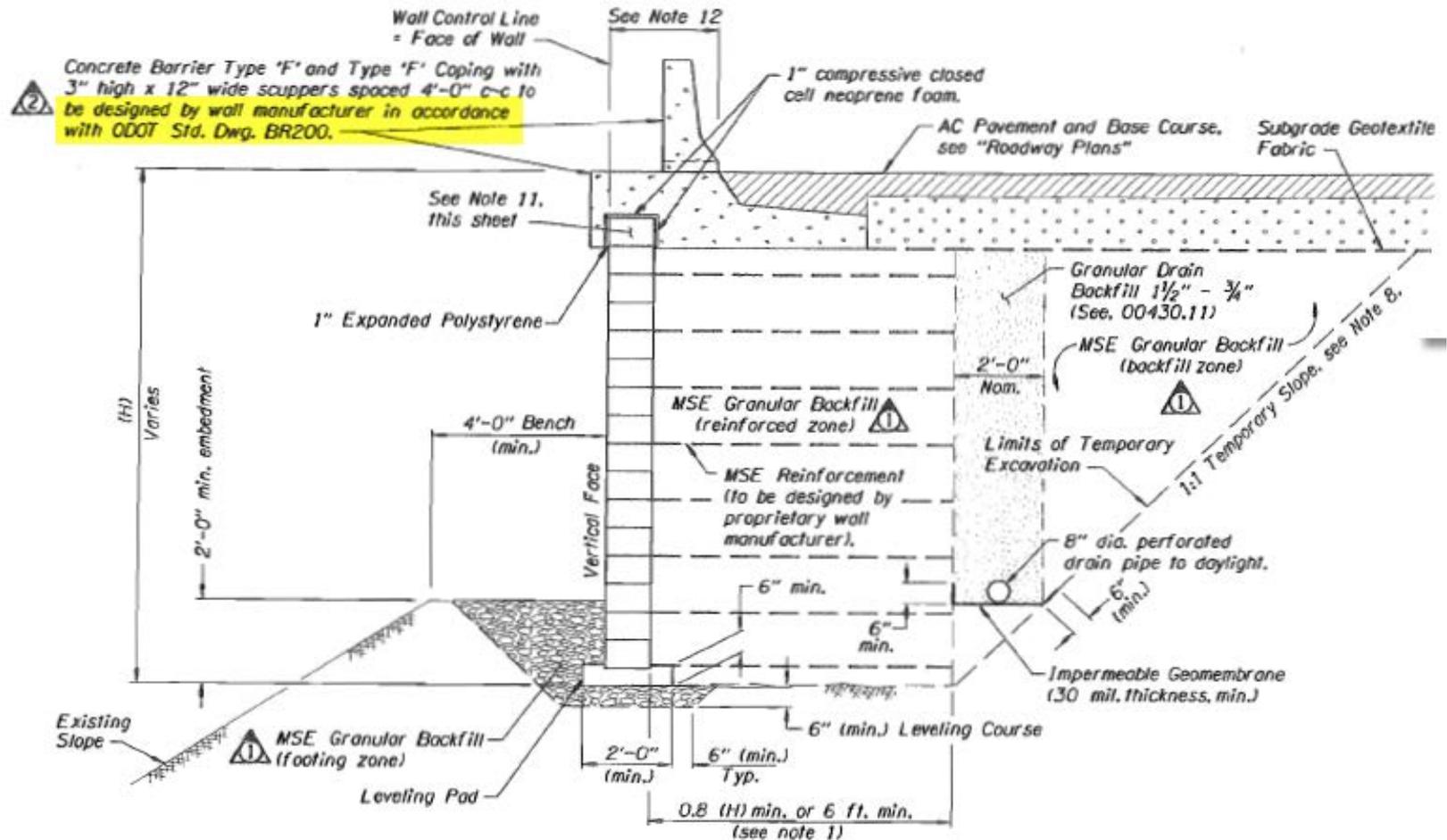


- Adjust Manhole Shown Thus:
- Remove Manhole Shown Thus:
- Cap Inlet Shown Thus:
- Remove Inlet Shown Thus:
- Fill Extg. Pipe With CLSM And Abandon Shown Thus:
- Traffic Separator/Wall Barrier And Chain Link Fence/Pavement Removal Shown Thus:



<b>OREGON DEPARTMENT OF TRANSPORTATION</b>	
<b>DAVID EVANS AND ASSOCIATES INC.</b> 200 Southwest River Parkway Portland Oregon 97201 Pdx 503.223.6663	
<b>OR 99E: DUNES DRIVE - 10TH STREET (OREGON CITY) SEC.</b> PACIFIC HIGHWAY EAST (MCGLOUGHLIN BOULEVARD) CLACKAMAS COUNTY	
Reviewed By - <i>MD</i> Designed By - S. DREHER Drafted By - V. BOLTON	
<b>GENERAL CONSTRUCTION</b>	
SHEET NO.	6

## Moment Slab



**TYPICAL SECTION**

No Scale



## Consistency Lessons Learned

- It is very important.
- AGC relies on it and expects it.
- Our plans, specs and other contract documents collectively describe the work we need done.
- Facilitates a quality project for a reasonable price.



# QUESTIONS