Module 4

Engineer’s Estimate

EBASE Overview & Reports
Summary of Quantities
Funds, Groups, Columns
Not a hands-on EBASE class!

- Strategies and data needed for successful estimate preparation

- For **hands-on** EBASE **training** contact:
  - Region Plans or Plan Review Office
  - HQ Plans Office
What is EBASE?

Estimates and Bid Analysis System

Estimates Module → Bids Module

Scoping → PS&E

Ad → Award
EBASE Reports

✓ **Proposal** (to Contract Provisions)

✓ **Preliminary Estimate** (to Program Mgmt)
  - Summary Report
  - Fund Report
  - By Group Report
  - By Item Report
  - Work Classification Report

✓ **Summary of Quantities** (to Contract Plans)
Destroy Sensitive Material Not Required for Your Records
EBASE Reports

How the Engineer’s Estimate is Used
Engineer’s Estimate

• Internal and external planholders use the **Summary of Quantities** to grasp the nature and magnitude of the work.
Engineer’s Estimate

• **Program Managers** use **Preliminary Estimates** to monitor and balance the overall WSDOT Program.
Engineer’s Estimate

- **Contract Ad & Award** uses **Work Classification Reports** to determine which contractors are eligible to bid on specific contracts.
Engineer’s Estimate

• **Accounting** uses the **Preliminary Estimates** to set up construction phase Work Orders (aka Contract #s)
Engineer’s Estimate

• Pre-qualified Contractors submit their bids on the Proposal Form
Engineer’s Estimate

- **Contract Ad & Award** identifies the low bid by comparing bids received on the **Proposal Forms** against the **Preliminary Estimate**
Engineer’s Estimate

- **Project Offices** compare bids in the Bid Check Report against the *By Item Report* to justify award or rejection of bids over 10% or $50K.
Summary of Quantities

PPM 460.04
Plan Example 4-7
Where Contract Bid Items Come From

Plans
- Profiles
- Q-Tabs
- Structure
- Notes

Misc Qtys

Non-tabulated Qtys
Tables in Plans
Lump Sum Items
Estimated Items
Calculated Items

EBASE

Summary of Qtys

Proposal

+
• Complete tabulation of all bid items and pay quantities for project

• Generated by EBASE
Bid items are grouped by major categories of work aka Section Headers:

- **PREPARATION**
  - MOBILIZATION
  - REMOVING GUIDE POST
  - REMOVING MONUMENT CASE AND COVER

- **GRADING**
  - SHOULDER PREPARATION

- **SURFACING**
  - CRUSHED SURFACING TOP COURSE
**Bid items** shall be listed in the same order as they appear in the **Standard Item Table**

**Non-standard items** (not in the **Standard Item Table**) shall be intermixed (according to type of work) with the bid items that are listed in the Table
What Do I Need for Summary of Quantities?
Project (WIN)

PIN
Program
Funding Part.
Control Section
3rd Party Damage

Work Locations

Bid Items
Non-Bid Items
Fund Sources

Many sources of construction funds:

- **Private*** (developers, utilities, etc.)
- **Local*** (cities and counties)
- **Federal** (tax dollars)
- **State** (tax dollars)

*Requires participation agreement
Funding Participation

Participation may be:

- **Percentage** (eg. 90.66%, 86.5%)
- **Maximum dollar amount** expressed as 100% expenditure (eg. 100% of $4.2 M)

4 types of participants
How multi-participant funds are disbursed

Sequence fund expenditure in this order:

1. **Private $$** - spend first
   (often a maximum amount)

2. **Local $$** - spend next
   (sometimes a maximum amount)

3. **Federal $$** - next
   (generally a percentage)

4. **State $$** - last
   (always 100%)
How multi-participant funds are disbursed

**Example:** Project includes federal interstate maintenance funds, state funds, $4.2 M developer mitigation, and City participation of $1 M.

Set Fund up in this spending order:

1. **Developer** @ $4.2 M maximum
2. **City** @ $1.0 M maximum
3. **Federal IM** @ 90.66%
4. **State** @ 100% (of remainder)
### Project (WIN)

**PIN**
Program Funding Part.
Control Section

3rd Party Damage

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#### FUNDS

![Image of money bags]

#### GROUPS

<table>
<thead>
<tr>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUP 3</th>
<th>GROUP 4</th>
<th>GROUP 5</th>
<th>GROUP 6</th>
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</thead>
<tbody>
<tr>
<td>STA 351+27 TO STA 367+87</td>
<td>STA 392+09 TO STA 463+48</td>
<td>STA 507+60 TO STA 526+36</td>
<td>PSE SNO CO</td>
<td>ALDER-WOOD WATER SNO CO</td>
<td>VERIZON EVERETT</td>
</tr>
</tbody>
</table>

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**Non-Bid Items**
PPM 460.04

**Group Rules**

A Group is required for each:

1. Program Item Number (PIN)
2. Program-Subprogram (P1, P2, I1, I2, etc.)
3. Fund-Source-Participation Rate Change
4. 6-digit Control Section
5. Third Party Damage (1 per contract)
### Project (WIN)

<table>
<thead>
<tr>
<th>GROUP 1</th>
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<td>STA 351+27 TO</td>
<td>STA 392+09 TO</td>
<td>STA 507+60 TO</td>
<td>PSE SNO CO</td>
<td>ALDERWOOD WATER</td>
<td>VERIZON EVERETT</td>
<td>THIRD PARTY DAMAGE</td>
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<tr>
<td>STA 367+87</td>
<td>STA 463+48</td>
<td>STA 526+36</td>
<td>SNO CO</td>
<td>SNO CO</td>
<td>EVERETT</td>
<td>DAMAGE</td>
</tr>
</tbody>
</table>

**Work Locations**

- SECTION 1
- SECTION 2
- SECTION 3

**Columns**

**Items**

**Bid Items**

**Non-Bid Items**
**PPM 460.04**

**Column Rules**

- Must have a **minimum of 1 column** per group (usu. Roadway work)
- Every column shall be **assigned to a group**

<table>
<thead>
<tr>
<th>GROUP 1</th>
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<td>VERIZON EVERETT</td>
<td>THIRD PARTY DAMAGE</td>
</tr>
</tbody>
</table>

| Col 1 | Col 2 | Col 3 | Col 4 | Col 5 | Col 6 | Col 7 |
PPM 460.04

Column Rules

A **Column** is required for each:

- ✓ Bridge
- ✓ Wall
- ✓ State furnished Pit

+ Unless tabulated separately in the Plans
<table>
<thead>
<tr>
<th>ITEM</th>
<th>GROUP 1</th>
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<td>CLEARING AND GRUBBING</td>
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<td>4.20</td>
<td>1.00</td>
<td>0.40</td>
<td>1.20</td>
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<td>REMOVING DRAINAGE STRUCTURE</td>
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<td>REMOVING GUARDRAIL</td>
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**Bid Items**

**Non-Bid Items**
# Bid vs. Non-Bid Items

<table>
<thead>
<tr>
<th>Bid Item</th>
<th>Work performed by Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Bid Item or Below the Line Item</td>
<td>Material or work charged to the contract . . . but. . . <em>not</em> furnished or performed by Contractor</td>
</tr>
</tbody>
</table>