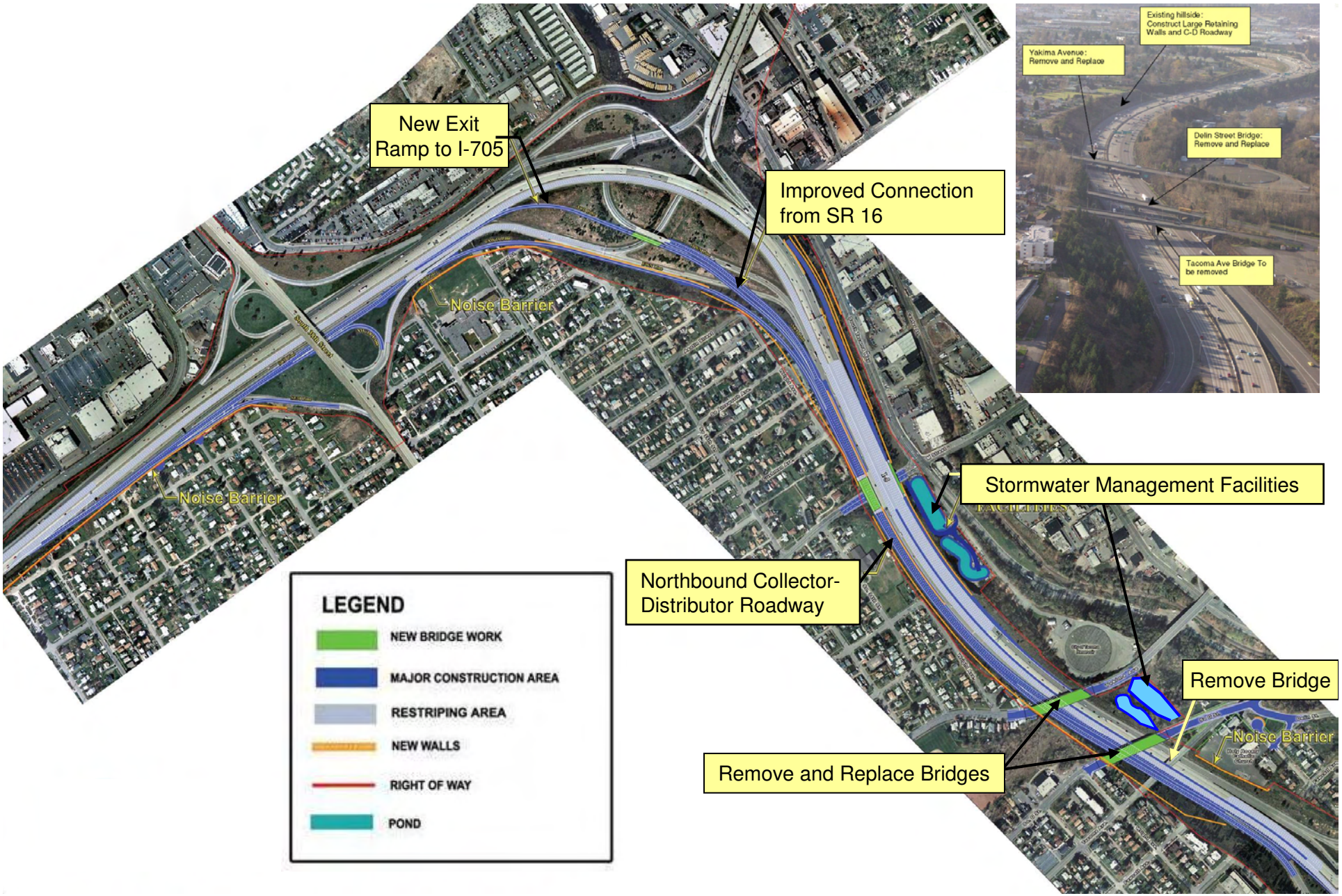
Existing Conditions **From this…** → **To this…** Design Visualization

I-5 – South 48th Street to Pacific Avenue

Motorists who travel northbound I-5 between the junctions of SR 16 and I-705 experience heavy congestion due to the 'weave' of traffic created by vehicles merging from SR 16 and exiting on I-705 to downtown Tacoma. When the I-5 South 48th to Pacific Avenue Nickel Project is complete in 2008, the traffic 'weave' on northbound I-5 between SR 16 and I-705 will be greatly improved, providing safer travel and reducing accidents and traffic congestion through this busy segment.

This project provides 7.4 new lane miles, by building the new multilane northbound collector-distributor roadway (depicted above, right.) It constructs multiple retaining walls designed to maximize available space within existing right of way in order to build the new NB C-D roadway. Three city street bridges will be removed and two will be replaced, in order to build the NB C-D and future mainline widening beneath them. This project also prepares for construction of the I-5 / SR 16 Interchange and SR 16 Nalley Valley Viaduct HOV projects, funded by the 2003 and 2005 Legislative Transportation Packages.

I-5 – South 48th Street to Pacific Avenue



I-5 – South 48th Street to Pacific Avenue Noise Mitigation


Existing Conditions


Design Visualization

This project provides noise barrier walls at three locations to reduce traffic noise levels at local schools and residential areas adjacent to Interstate 5.

- The in-place cost of these barriers totals $3,472,000.
- Collectively, these walls provide 47,047 square feet of noise barrier.

I-5 – South 48th Street to Pacific Avenue Wetland Mitigation

Existing Conditions – I-5 and SR 16

Several small wetlands exist on a cut slope in the I-5 / SR 16 interchange. This slope will be removed and retaining walls will be constructed to maximize available space for building the northbound collector-distributor roadway. This unavoidable impact removes 0.21 acres of wetlands.

Wetlands on this project fall under two jurisdictions: City of Tacoma Critical Areas Preservation Ordinance, and the U.S. Army Corp of Engineers.

Wetlands on hillside

WSDOT contributed $25,265 to City of Tacoma's wetland bank fund, to mitigate under their Critical Areas Ordinance. The U.S. Army Corp of Engineers' permit conditions required WSDOT to collect additional runoff from nearby city streets and convey this stormwater to the new management facilities, necessitating placement of additional new drainage structures. Wetland mitigation totals $94,047.

I-5 – South 48th Street to Pacific Avenue Stormwater Mitigation

This project constructs two new stormwater management facilities to manage runoff from Interstate 5. These facilities are designed to treat over 32 acres of stormwater runoff.

Real estate was acquired from the City of Tacoma and private landowners to build these large systems, which are depicted in the drawing.

This section of I-5 was initially built 50 years ago, prior to the environmental protections now established. Much of the drainage from this section of freeway is collected in stormwater pipes and drains directly to the Thea Foss Waterway; untreated by today's standards. Upon completion of this and subsequent funded HOV projects in the immediate area, stormwater will be treated and released gradually back into the environment.

Including real estate acquisitions, the in-place cost of these stormwater management facilities totals $3.84 million.

I-5 – South 48th Street to Pacific Avenue Stormwater Mitigation

- Yakima Avenue Facility cost $1,083,038
- Impervious area treated 646,900 sf
- $1.67/sf impervious area treated

Yakima Avenue Ponds

A temporary mechanical filtration system was set up to treat the stormwater during construction

Construction photos of the new stormwater management facilities shown in various stages of completion. These ponds go to work immediately as an element of on-site erosion and sediment control during project construction.

- "M" Street Facility cost $2,756,340
- Impervious area treated 750,100 sf
- $3.67/sf impervious area treated

"M" Street Facility Underway

I-5 – South 48th Street to Pacific Avenue Context Sensitive Solutions

Left: Design Visualization depicting one of the wall fascia patterns along I-5 in Tacoma.

Process Experience:

- As the artist prepared aesthetic wall concepts, the project team coordinated final wall plans and dimensions as a working canvas.
- The contract document was more difficult to prepare, due to the added complexity required in the plans, showing proper orientations for the various unique concrete forms.
- The actual field placement of these patterned forms will be more complex than usual.

This project will provide wall fascia designs unique to the City of Tacoma's heritage. In the design of this project, WSDOT and the city developed a partnership and agreed to include on some of the concrete walls different patterns that reflect the community's local history and industry. The artist, hired by the City of Tacoma to develop the wall designs, provided several different patterns, meant to reflect the local maritime and woodworking industries. The city and WSDOT developed criteria for the architectural treatments such that the chosen wall locations and the patterns employed would not be distractive to motorists, and that the city would cover costs above and beyond that of WSDOT's typical random board wall treatments. When completed, several walls within the project will display patterns reflecting Puget Sound waves, woven rope, and wood molding shapes.

I-5 – South 48th Street to Pacific Avenue Cost Summary

Preliminary Engineering	$7.47 M
Right of Way	$5.30 M
Construction	$94.87 M
Total	$107.64 M

Mitigation Elements	All-in Mitigation Cost (*)	% of Total Project Cost
Noise	$3.47M	3.2%
Wetland	$0.09M	0.1%
Stormwater	$3.84M	3.6%
Subtotal of Mitigation Elements	$7.40M	**6.9%**
All Other Items	$100.24M	
Total	$107.64M	

(*) All-in cost includes allocation of preliminary engineering, right of way, and construction cost.

3.2%

Noise – $3.47M

3.6%

Stormwater – $3.84M

1%

Wetland – $0.09M